Implications of Internet Usage Policy on Personal Web Usage from the Perspective of Senior Management and Other Staff Members

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ABSTRACT

The use of the Internet has increased exponentially for the past three decades. In many organisations, the Internet has been the backbone of communication and dissemination of information. Personal web usage (PWU) is an emergent phenomenon within organisations that rely on the access of the Internet in order to function properly. The unrestricted and unmanaged PWU activities have become causes for concern for tertiary education institutions. Some of these activities include sending personal email, online shopping, downloading video or software, and accessing adult-oriented websites.

This study utilised a quantitative approach to gauge the understanding of the senior management and staff members’ perceptions of the Internet usage policy, to evaluate attitudes and perception of staff members concerning the use of the Internet for both personal and work purposes, the impact of the Internet usage policy on staff members’ performance, as well as staff’s perception of the adoption of monitoring tools in tertiary education institutions. The first phase of this research involved an electronic questionnaire administered to 1000 randomly selected staff members (n = 198) (encompassing academic, general and contract staff excluding senior management), while the second phase of this study yielded participation of senior management (n = 34) (encompassing Associate Dean, Dean, Head of Department, Director, and Deputy Director).

Findings from analysis of the first-phase questionnaire reveal difference in perceptions between academic staff and general staff concerning the impact of the Internet usage policy on job performance. Additionally, the results show differences in self-reported use of the Internet between academic and general staff. Findings from the second phase suggest that senior management perceive the monitoring tools and policy used within the university to have impact on an individual’s decision to abuse the Internet. However, only 35 percent of the senior management believe that the Internet usage policy has an impact on staff performance. The results of the study may help the management and technical teams to enhance the Internet management practices in the near future.
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CHAPTER 1: INTRODUCTION

The use of the Internet has gained much popularity over the past three decades and it has changed the way organisations operate in today’s business world. The Internet allows an individual or organisation to interact, communicate, and access any website in the world without any physical limitation. In addition, the adoption of the Internet in business operations can greatly add value to organisations, as it helps to lower the cost of communication, shortens product life cycle times, facilitates information access, and improves marketing services and products (Mandel & Hof, 2001). In many organisations, the Internet has been the backbone of communication and dissemination of information (Sharma & Gupta, 2003). It is undeniable that the Internet has increased employees’ work efficiency and productiveness; hence, there is a widespread increase in dependence upon such technologies (Fezile, 2011).

Despite the many benefits of using the Internet, employers are concerned about their employees’ excessive use of the Internet for personal purposes (Young, 2010). Uncontrolled Internet access could expose organisations to legal liability, employees’ privacy and productivity losses (Lim & Teo, 2005; Simmers, 2002). Given that the Internet is an essential tool to organisations, the Internet provides employee access to the world’s largest playground (Anandarajan, 2002). More employees are exchanging personal emails, online shopping, personal banking, reading news or sports via the Internet at work (Mahatanankoon et al., 2004). As a result, the Internet has been viewed as a double-edged sword (Lim & Teo, 2005).

Employees feel that it is acceptable to spend a few seconds or minutes on activities, such as forwarding an email to friends or reading stock market results; however, an accumulation of seconds to hours per day per employee could result in financial losses to the organisation. Anyone who has accessed the Internet and e-mail at work for purposes other than his or her official work is engaging in personal web usage (PWU). The term PWU is defined as “voluntary online web behaviours during working time using any of the organization’s resources for activities outside current customary job/work requirements” (Mahatanankoon et al., 2004, p. 93). Often these deviant Internet activities are regarded as
cyberloafing, Internet abuse, non-work-related computing, and problematic Internet use (Bock et al., 2010; Caplan, 2002; Lim et al., 2002b; Young, 2006).

The need to protect organisations from unrestricted and unmanaged Internet access has become a critical issue across all industries (Stewart, 2000). Stewart (2000) argued that the effectiveness of Internet Acceptable Use Policies (IAUP) requires full support from the management and use of the monitoring tool to control the excessive PWU. He mentioned that the key reasons for developing a policy governing the Internet usage are to protect the confidentiality of organisation information and organisation reputation, to avoid legal liabilities and risk from the Internet, as well as to maintain a secure and productive working environment.

According to a survey conducted by the American Management Association (AMA), 66% (n= 304) of the U.S. companies monitor their employees’ Internet connections. Of those companies 84% had informed their employees about the Internet usage being monitored, and 71% of the companies alert employees concerning the monitoring of their emails (American Management Associations, 2007). Even though tighter monitoring system have been put in place by organisations, personal use of the Internet and email have been on the rise in workplaces (Arnesen & Weis, 2007). To address these concerns, it is essential to understand how organisations establish and implement rules to control the inappropriate online behaviour on the usage of computer and the Internet (Siau et al., 2002).

1.1 Research Problem and Research Objectives

As discussed in the previous section, every organisation that provides Internet access to its employees needs an effective control mechanism, such as the Internet policy and monitoring tools to guide employees’ Internet usage (Foltz et al., 2005; Friedman & Reed, 2007; Siau et al., 2002; Stewart, 2000). Apart from adopting the available hardware and software solutions that protect an organisation from external threats, such as hackers, security risks, and virus attacks to the organisation's network, the organisation needs to understand how employees utilise the Internet in the office. The enforcement of the Internet usage policy will not be successful if there is no exertion to promote or educate the users about the new policy. In order to evaluate the efficiency of the Internet usage
policy, it is necessary to determine the level of staff knowledge about the policy (Foltz et al., 2005). However, there is a lack of research in addressing the staff’s perception of the acceptance of personal use of the Internet and the impact of the Internet usage policy on job performance in tertiary education institutions. Therefore, it is necessary to examine the staffs’ attitudes to utilising the Internet for personal purposes both during and after work hours, concerning their views on personal usage of the Internet, the Internet policy on staff performance and personal purposes, as well as the adoption of monitoring tools on staff performance and personal purposes. This study aims at bridging the knowledge gap by providing information on the frequencies and types of Internet activities engaged in by the University of Otago staff.

This study examines the senior management’s and staff members’ understanding and perceptions of the Internet usage policy, and it evaluates attitudes and perception of staff members concerning the use of the Internet for both personal and work purposes, the impact of the Internet usage policy on staff members’ performance, as well as staffs’ perception of the adoption of monitoring tools in tertiary education institutions. This study uses web-based surveys to gather data from senior management and staff members at the University of Otago. The findings from this research would serve as an invaluable tool for the University to improve and manage the staff’s Internet usage. This may help the management and technical teams to enhance the Internet management practices in the near future. A representative sample of academic and general staff members at the University of Otago has been selected for this study.

1.2 Research Questions

This study focuses on the understanding of senior management and other staff members’ perceptions of the Internet usage policy and personal web usage. A matrix in Appendix D.3 shows the relationship between the survey questions and the research question under study.

**Question 1:** What are the differences in perception between staff members about the monitoring of personal web usage and email during work hours based on gender and job classification?
**Question 2:** What are the differences in perception between staff members concerning the impact of the Internet usage policy on job performance based on gender and job classification?

**Question 3:** Does gender or job classification have an effect on the Internet usage?

Q3a: What are the differences in frequency of usage of the Internet for personal purposes between staff members based on gender and job classification?

Q3b: To what extent do staff members differ in perception about the acceptable use of the Internet for personal purposes during work hours based on gender and job classification?

Q3c: To what extent do staff members differ in perception regarding the acceptable use of the Internet for personal purposes after work hours based on gender and job classification?

Q3d: To what extent do staff members differ in perception concerning the knowledge of the Internet usage policy based on gender and job classification?

### 1.3 Definition of Terms

**IUP:** The Internet usage policy is a policy that provides guidelines and instruction to employees concerning the use of the Internet at workplace.

**PWU:** Personal web usage is an act of using their organization’s Internet access during working hour for non-work-related activities.
1.4 Thesis Structure

This thesis consists of six chapters. The first chapter provides a general overview of this research study. It discusses the research problems, the significance of this research, and a general overview of the thesis structure.

Chapter 2 provides a review of the literature related to the research study. It discusses the issues of non-work-related Internet usage, the Internet acceptable usage policy and the appropriateness of adopting Internet monitoring tools.

Chapter 3 discusses the methodology of this research. This chapter outlines the research design, and includes a discussion on the selection of samples, the development of the survey the questionnaire, the data collection procedure, and data analysis.

Chapter 4 presents the findings of Phase 1 data collection and data analysis. Data collection involved an online survey of staff members (the academic and general staff members excluding senior management). Results of the data analysis are included in this chapter.

Chapter 5 presents the findings of Phase 2 data collection and data analysis, which involved an online survey of senior management (Acting Associate Dean, Associate Dean, Deputy Dean, Dean, Head of Department, Director, Deputy Head Of Department and Acting Director).

Chapter 6 concludes this thesis by presenting a discussion of the findings for this research study from both the first and second phases of data collection, as well as providing recommendations for future studies. Limitations of this study are also noted in this chapter.
CHAPTER 2: LITERATURE REVIEW

Given the increasing reliance on the Internet in the workplace, organisations may need to control employees’ Internet usage. Since employees have e-mail and the Internet access in the workplace, it is possible for the employees to divert their attention to non-work-related activities during work hours. The broad range of conceptual terms of non-work-related Internet deviant behaviours, the context of the Internet acceptable usage policy, and monitoring tools are discussed in the following sections.

2.1 Concepts for non-work-related Internet use

Several conceptual terms have been used to describe the non-work-related deviance behaviour (Bock & Ho, 2009; Griffiths, 2010; Lim, 2002a; Mahatanankoon et al., 2004). The following sections discuss the conceptual terms of the non-work-related Internet usage.

2.1.1 Personal web usage (PWU)

Personal web usage has been defined as “voluntary online web behaviours during working time using any of the organization’s resources for activities outside current customary job/work requirements” (Mahatanankoon et al., 2004, p. 93). This means that employees engage in non-work-related activities for personal purposes. These non-work-related Internet activities include visiting news sites, online shopping, job search, video games, video streaming, music downloads, and online communities (Kim & Byrne, 2011).

Lee and his colleagues (2004) consider non-work-related Internet usage of over 30 minutes a day as extensive personal use. They used 546 responses to analyse the differences between two groups: non-personal web usage group and personal web usage group. Their results indicated that there are different attitudes and social influences between the non-personal web usage group and the personal web usage group. The results also highlighted that policies and monitoring systems do not significantly influence either the intention to
commit or the frequency of PWU, which suggested that policies and monitoring systems have no impact on personal usage of the Internet (Lee, Y. et al., 2007).

In another study, Mahatanankoon and his colleagues (2004) used multi-dimensional measures to assess personal web usage activities. They constructed three dimensions (i.e. personal e-commerce, personal information seeking and interpersonal communications) to measure PWU. The results showed that entertainment and downloading are not part of the general Internet usage norm in the workplace - work inefficiency and job satisfaction have no significant relationship with personal web usage; and the three dimensions have no impact on productivity.

Anandarajan and his colleagues (2011) used the psychological contract theory to construct a more comprehensive definition of PWU. They adopted a broader approach by using a multi-dimensional techniques and cluster analysis to measure the PWU behaviours. As a result, they identified four clusters of PWU behaviours – work/life PWU, self development PWU, citizenship PWU, and hedonic PWU. However, it is hard for the organisation and individual to distinguish the positive and negative aspects of the PWU behaviours when non-work activities are intertwined between work and life. König and Caner de la Guardia (2014) stated that since employees are expected to check their email at home, they might reciprocate this by answering private emails at work.

The above studies explained the different aspects of PWU and the negative impact of PWU on productivity. It is interesting to note that the effectiveness of a deterrent approach, such as monitoring and policies failed to change employees’ PWU (Johnson, J. J. & Ugray, 2007) . On the other hand, Ugrin and colleagues (2008) argued that the awareness of the policy could reduce the employees’ intention to PWU. Similarly, the monitoring and sanction of excessive Internet usage could minimise employees from engaging in PWU (Zoghbi-Manrique-de-Lara & Aristides, 2010).
2.1.2 Internet Abuse

Employees can use the Internet to facilitate job-related duties, but they can also become distracted and waste a lot of time engaging in non-job-related activities that impact productivity, result in legal liability, and waste other resources (Stewart, 2000). Griffiths (2003) highlighted that if Internet usage is left unsupervised or unrestricted, Internet abuse in the workplace can hurt an organisation’s reputation for quality and service. Overly engaging in surfing the Internet during work hours may cause undesirable outcomes to the organisation, such that the employees are unable to respond to customers’ needs, unable to meet deadlines, and fail to complete tasks (Griffiths, 2003). Taneja (2006) found that attitude towards adverse usage, social influence, perceived behavioural control, and moral norms are significantly related to Internet abuse. According to Lim (2002a), employees rationalise their misuse of the Internet in the workplace when they perceived that they are treated unfairly by their employers. For example, the employees use the Internet to compensate for the extra working hours in the workplace by accessing the Internet for personal activities, such as banking, online shopping and reading news.

According to American Management Association (2008), it is estimated that two-thirds of U.S. companies have an acceptable Internet use policy to combat employee misuse. However, over half of 304 employers have fired workers for email and Internet abuse. The study also found that 28% of the employers who have fired workers for email misuse did so for the following reasons: violation of any company policy (64%); inappropriate or offensive language (62%); excessive personal use (26%); breach of confidentiality rules (22%), and others (12%). Other Internet abuses by employees include illegal downloading of copyright-protected software and child pornography, just to name a few.

Oravec (2002) stated “constructive use of online recreation and play can enhance many workplaces and perhaps ultimately make them more productive” (p. 60). The term constructive recreation means recreation, which is limited in content and timing so as to not interfere with an organisation’s goals and needs. Such work ethic would yield greater benefits in terms of well-being and creativity. Even so, the negative effects, such as waste of time, reduced bandwidth, legal exposure, or ethical issues may prevail over the benefit of productivity (Galletta & Polak, 2003). Siau and colleagues (2002) highlighted 11
aspects of Internet abuse, which include general email abuses, unauthorised usage and access, copyright infringement/plagiarism, newsgroup postings, transmission of confidential data, pornography, hacking, non-work-related download/upload, leisure use of the Internet, usage of external ISPs and moonlighting.

2.1.3 Cyberloafling

Because of the extensive research and similar nature of the Internet abuse, several terminologies have been adopted to describe the employees’ misuse of corporate Internet resources. One of the terms used is cyberloafing, which is defined as ‘any voluntary act of employees’ using their companies’ Internet access during office hours to surf non-job-related websites for personal purposes and to check personal e-mail’ (Lim, 2002a, p. 677). This means that a person engages in non-work-related activities such as chatting or watching YouTube.

Scholars (Lim, 2002a; Lim & Teo, 2005) generally conceptualised cyberloafing as a form of work place production deviance. Depending on the severity of the behaviour, minor cyberloafing (e.g. viewing news websites) could be harmless to the organisation while serious cyberloafing (e.g. viewing adult-oriented websites) is perceived to be problematic and inappropriate (Blanchard & Henle, 2008). Lim (2002a) stated that cyberloafing consists of two factors, namely web browsing and emailing. She found that the boundaries between work- and non-work-related activities have become blurred.

Blau and his colleagues (2006) added new scales on Lim’s (2002b) conceptual definition of cyberloafing. These three additional factors are labelled as browsing-related, non-work-related e-mail and interactive cyberloafing. They found that browsing-related and non-work-related email cyberloafing are positively correlated with time abuse, which suggested that employees are more likely to commit cyberloafing when they are free. Greenfield and David (2002) estimated that an employee spends an average of three hours per week cyberloafing, whereas Mills and his colleagues (2001) estimated employees spend an average of two and a half hours per day cyberloafing. Consequently, cyberloafing could cause organisations loss in production and potential legal issues when employees
download copyrighted material, and view or send offensive material (Mills et al., 2001; Panko & Beh, 2002).

Blanchard and Henle (2008) argued that employees would continue to engage in cyberloafing even though they know these behaviours are inappropriate at work. They explained that employees would think that the likelihood of getting caught for inappropriate behaviours is low. They suggested that the enforcement of the monitoring software should be able to control the inappropriate behaviours.

Many workers used the Internet for cyberloafing as a way to alleviate boredom, irrespective of their workload (PhysOrg.com 2009). Therefore, from this perspective, cyberloafing may be acceptable if employees’ behaviours do not deviate from the group’s norm (Kim & Byrne, 2011). On the other hand, minor cyberloafing is more prevalent than serious cyberloafing (Kim & Byrne, 2011); (Lim, 2002a). After all, Internet use and abuse are somewhat secretive and elusive (Greenfield & Davis, 2002).

2.2 Internet Acceptable Usage Policy (IAUP)

Previous studies (Gaskin, 1998; Lichtenstein, 2011; Siau et al., 2002; Stewart, 2000) have been published about the need for policies to address the issues and concerns surrounding the personal use of the Internet in the workplace. An Internet acceptable usage policy is often used to protect organisations from malicious attacks, ensure availability of resources, and also to control employees’ behaviours (Lichtenstein & SWATMAN, 1997; Pitzen, 2012) while in practice it is mostly on “deontological ethics, i.e. employee doing the right thing, to work” (Ruighaver et al., 2010, p. 732). According to Lichtenstein and SWATMAN (1997), the IAUP is considered as sub-policy of the security framework that served two important functions: part of security policy, and the guidelines for the Internet usage that meet the organisation objectives and value-added business. Ruighaver, Maynard and Warren (2010) argued that the traditional approach to acceptable usage policy is insufficient to cover all the possible risks. They suggested that a policy based on ethical decision-making could help employees make better judgements when dealing with unforeseen circumstances.
According to Wood (2005), acceptable Internet use can be categorised into three groups, namely red, yellow and green. Each group indicates the level of access given to the employees, where red indicates prohibited access, yellow indicates access that requires departmental managers approval, and green indicates no restriction. He pointed out that downloading software and pornography belongs to the red group. The behaviours in the yellow group are permissible only if departmental managers approve of them, behaviours such as personal web shopping and financial management. Finally, the behaviours in the green group are permissible at any time, such as research material, and business-related email.

Although most of the IAUP highlights the rules and limitations of Internet usage, the existence of this policy does not guarantee that all employees have read and understood it (Foltz et al., 2005). Employees may fail to understand the content of the policy if it is full of legal terms. Therefore, employees involvement in developing the policy could create a better working environment (Arnesen & Weis, 2007). Previous research noted that employees who are involved in developing the policy have greater awareness of the policy as compared with those who have neither the exposure nor involvement in policy development (Foltz et al., 2005). Those who are aware of the policy have a greater chance to use and manage their information resources more effectively and securely (Doherty et al., 2011).

However, unrestricted and unmanaged Internet access could lead to numerous risks and consequences (Stewart, 2000). For example, viewing adult-oriented websites is considered as unethical behaviour. This unethical behaviour could further damage the organisation’s reputation and goodwill due to negative publicity (Stewart, 2000). In order to minimise the chance of employees abusing it, organisations could take severe disciplinary action against their employees, ranging from preliminary verbal warnings to employment termination. Therefore, it is important for organisations to address the issues of what does and does not constitute acceptable behaviour (Stewart, 2000). Stiefer (2000) suggested that drafting the Internet use policy should address the issues relating to ownership of email, the extent to which email can be used for personal communication, to what extent the employee will be monitored and their ability to send confidential and sensitive information, and the understanding of acceptable or unacceptable web sites.
Lichtenstein (2011) showed that sanctions for non-compliance are inefficient to reduce Internet misuse, while another study (Straub & Welke, 1998) suggested that sanctions could reduce the Internet misuse. An effective policy could be achieved if organisations understand the employee behaviour and perception (Fichtner et al., 2013). Hence, it is important for this study to examine the employees’ level of knowledge of the organisational policy concerning the usage of the Internet.

2.3 Electronic Monitoring

With the increasing use of email and Internet in the workplace, numerous monitoring tools have been developed to track employees’ Internet activities. These tools range from tracking employee keystrokes to viewing websites that the employees have visited. The electronic monitoring of employees could benefit organisations. The American Management Association and The ePolicy Institute (2007) survey reported that 66% of 304 companies used electronic monitoring tools to track employees’ Internet access.

However, electronic monitoring tools could invade employees’ privacy as their organisations have the ability to view all mails and Internet activity (Lease & Jean Gordon, 2005). Hence, organisations have to strike a balance between monitoring employees’ Internet access and a violation of trust or privacy (Fleming, 2007).

On the positive side, electronic monitoring could protect organisational assets, block spam and viruses, prevent the misuse of company resources, and minimise the risk of legal liability from Internet abuse at work (Alampay & Hechanova, 2010; Eivazi, 2011; Fleming, 2007). Employees may abuse the Internet by accessing inappropriate websites, such as adult-oriented web sites, gambling sites, or downloading illegal software, and organisations may be held liable for these actions or activities. It is also suggested that the use of electronic monitoring could improve employees’ performance or productivity (Eivazi, 2011). This could be achieved by informing the employees concerning the monitoring of their emails and Internet activities. Employees might control their non-work-related activities if the likelihood of being caught is relatively high.
Martin and Freeman (2003) provided seven key arguments about electronic monitoring in the workplace. The first argument is that monitoring could reduce personal use and increase productivity. The second argument is that monitoring could detect and stop security breaches. The third argument is that monitoring could protect the organisation from liability of sexual harassment and hostile environment. The next argument is that the employees have no control over their data privacy. Subsequently, they argued that monitoring could block employees’ creativity. The next argument is that monitoring could be intrusive and result in lack of trust in a paternalistic relationship. Lastly, monitoring could impact the employees’ thoughts and acts.

Even though the aforementioned studies discussed the pros and cons of monitoring systems, employees could very well obfuscate their Internet activities and waste their time on non-work-related activities. As noted in previous studies, a punishment and monitoring system could be used to maximise employees’ productivity while minimising Internet abuse (Zoghbi-Manrique-de-Lara, 2011). According to Glassman et al. (2015), the countermeasure of cyberloafing through monitoring can be achieved thought a passive system with scheduled warnings. This indirectly reinforces the employee behaviours from cyberloafing. In addition, the monitoring should be consistent with the organisation objectives and performance issue (Moussa, 2015).

2.4 Summary

Chapter 2 has provided a review of the literature related to non-work-related Internet use concept. It included discussion of personal web usage (PWU), Internet abuse, cyberloafing, Internet acceptable usage policy, and electronic monitoring. This chapter paves the way for the development of this study’s research design. Chapter 3 discusses research methodology.
CHAPTER 3: METHODOLOGY

This chapter presents the method used in this study. It describes the design of the study, the instrument development and the selection of samples. In addition, this chapter also provides a discussion on the data collection process, data analyses, and the validity of the instrument.

3.1 Research Methods

There are three approaches to conducting research, namely, quantitative, qualitative and mixed methods (Creswell, 2009). Kumar (2005) explained that a quantitative approach is classified as a structured approach, which is a predetermined research process (e.g. objective, design sample, and questions for participants to answer). Creswell (2009) explained that the quantitative approach is “for testing objective theories by examining the relationship between variables” (p. 4). Quantitative methods include questionnaires, field and laboratory experiments (Cavana et al., 2001). One of the advantages of using quantitative approach is the representation of numerical data in the forms of tables, graphs and pie charts (Cavana et al., 2001). The quantitative approach also allows researchers to test a research hypothesis (Cavana et al., 2001). It allows researchers to investigate and replicate the findings with the same quantitative method (Creswell, 2009). However, it does not evaluate an individual’s decision based on their culture or social interactions (Bryman, 2004).

Kumar (2005) explained that a qualitative approach is classified as unstructured, which is a flexible research process. Creswell (2009) elaborated that qualitative research is “for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (p. 4). It requires researchers to collect the data, analyse the data to form general themes and interpret the themes into a meaningful data (Creswell, 2009). Qualitative research methods include interviews, focus group, and observation (Cavana et al., 2001). One of the advantages of using qualitative approach is its ability to interact directly with any individuals (Cavana et al., 2001). This allows the researchers to “reveal people’s values, interpretative schemes, mind maps, belief systems and rules of living so that the respondents’ reality can be understood” (Cavana et al., 2001, p. 34). However, the
researchers cannot apply any measurement on data as it is represented by words (Cavana et al., 2001). It usually takes the form of either observation or interview. Hence, it requires time and resources to collect and analyse the data (Cavana et al., 2001).

The mixed method approach is the combination of both quantitative and qualitative methods (Creswell, 2009). Creswell (2009) argued that the mixed method approach provides different perspectives in analysing and interpreting data. It involves the collection of both quantitative and qualitative data to form greater overall strengths of each research question. According to Green (1997), mixed methods compensate for limitations of both the quantitative and qualitative approaches. It allows researchers to generalise the findings to a population through the use of quantitative approach and explain the phenomena in detail by utilising qualitative approach (Creswell, 2002). However, Johnson and Onwuegbuzie (2004) argued that the mixed method approach requires researchers to be skilful and knowledgeable in order to use both quantitative and qualitative appropriately.

### 3.2 Research Design

Upon considering all the three approaches to conducting research in the previous section, this section discusses the research design for this research study. The following subsections present justifications for the selection of the research approach and design of questionnaires.

#### 3.2.1 Online Survey

This research study adopts a quantitative approach through the use of online survey. Online survey has been selected for this study primarily because of its ability to reach out to a larger sample size as compared with traditional methods, such as postal questionnaire (Ilieva et al., 2002). According to Ilieva (2002), one significant advantage of online survey is the controllability of the response time. With the flexibility of online survey, respondents have the advantage of completing it at their leisure and convenience rather than being restricted by tight time frames and schedules, such as with telephone interviews (Kellner, 2004). People are willing to answer questions posted on their computer screen as they can respond to the questions without pressure (Kellner, 2004). Furthermore, an online
survey is relatively low cost compared with traditional postal questionnaire (Cavana et al., 2001; Gosling et al., 2004; Watt, 1999). With online survey, the participants are required to access the web link provided by the researcher without incurring further cost, such as postage and envelop. Another advantage of using the online survey is fast response rate with minimal privacy issues, such that there is no face-to-face contact with the respondents. As a result, the anonymity of respondents is preserved. Lastly, the data collection in the online survey is stored in a format that can be used for analysis by statistical software.

On the other hand, there are some arguments raised against the use of online survey. Matsuo and colleagues (2005) argued that submitting a response multiple times and non-serious responses are commonly found in surveys. These issues create biased responses, which could compromise the answers, especially when the respondents are either familiar or unfamiliar with the research topic (Paulhus, 1991). To overcome the problem of multiple submissions, it is suggested that the researcher set a restriction on the online survey that disallows repeat responders (Gosling et al., 2004). This can eliminate any responses that have identical details.

### 3.2.2 Online Survey Description

The online survey was initially designed on paper format to identify the logical flow of the questionnaire. The survey was then built using a commercial-cloud-based online survey, namely SurveyMonkey. The flexibility of the SurveyMonkey software allows the researcher to customise the web site according to his or her preferences, such as drop-down menu, option button, checkbox, and textbox. The built-in features include skip logic question, custom reporting, real-time results, to name a few. In addition, all responses are saved on a secure server. The SurveyMonkey also allows the researcher to check the response rate at any time during the survey. Furthermore, it allows the researcher to set the start and end date of the survey. The researcher could access the results in real-time and have them saved in both Microsoft Excel spreadsheet and SPSS formats.
3.2.3 Survey Questionnaire

Phase One’s questionnaire examines the perceptions of the respondents regarding PWU and Internet usage policy. The questionnaire consists of three sections with a total of 28 questions.

The first part of the questionnaire collects the demographic information about the participants (i.e., age, gender, job classification, and length of employment), and additional background information on Internet experience (i.e., years of Internet experience). Additionally, two of the questions measure the number of hours a participant spends on accessing the Internet for personal and work purposes.

The second part of the questionnaire collects information about the participants’ usage of the Internet at the workplace. Information about Internet activities is collected ranging from minor personal web usage, such as online shopping, personal web-based email, online banking, research materials, the use of social network for work purpose, to major personal web usage, such as downloading of movies and/or music as well as accessing to sexual explicit websites.

The third part of the questionnaire collects a participant’s perceptions on using the Internet for personal purposes during and after work hours. The last three questions measure the impact and awareness of the Internet usage policy, as well as the appropriateness of adopting Internet monitoring tools at the workplace.

Phase Two questionnaire collects information about the senior management’s perceptions of the PWU, the development and enforcement of the Internet usage policy, and the impact of the Internet monitoring tools and policy on job performance. The questionnaire consists of 14 questions. Two questions examine the participants’ knowledge of the organisational policy. Further, two questions explore the participants’ perception of the PWU during or after work hours. Two questions measure how the monitoring tools and policy deter Internet abuse, and job performance, while another question investigates the factors that help with the successful enforcement of the policy at the workplace. A multiple-choice
question is also included to examine the senior management’s perceptions of problematic Internet activities.

3.2.4 Measures

The researcher reviewed the literature to identify a suitable measurement to use for answering the research questions of this research study. Previous studies (Alampay & Hechanova, 2010; Anandarajan et al., 2011; Mahatanankoon et al., 2004) are being used in this study to measure personal web usage (PWU), respondents’ perception of PWU, and the impact of the Internet usage policy and monitoring tool.

For measuring the perception of staff regarding the use of monitoring tools, one question is asked (Appendix C.1, question 22). A five-point Likert scale is used to measure the variable, rating from 1 (strongly agree) to 5 (strongly disagree). In the second phase, a self-developed question (i.e. do you think the monitoring tools and policy used within the University impact individual decisions to abuse the Internet) is used to examine the senior management’s perceptions of monitoring tools. The question allowed participants to choose one answer from five options: None, Almost none, Minor, Major, and Other.

To measure the impact of the Internet usage policy on job performance, a self-developed question is used (see Appendix C.2, question 26). The question allowed participants to choose one answer from four options: Yes, No, Neutral, and Don’t know. Similarly, in second phase, the question “do you think the implementation of the Internet policy has any impact on staff performance” is used. The choices available to the participants are None, Almost none, Minor, Major, and Other.

For measuring PWU activities, eight questions are adapted from previous studies (Anandarajan et al., 2011; Mahatanankoon & Igbaria, 2004) (see Appendix C.1, question 7-17). Some of the wordings of the adapted scale items have been slightly modified for this research study. An additional three self-developed Internet activities have been included to fit the context of the current study. These activities are “Accessed social network sites such as Facebook, Twitter and the like”, “Used social network sites as part of your work”, “Accessed research materials”. The question allowed the participants to
choose one answer from five options: 1 (Never), 2 (1-4 times per day), 3 (5-14 times per day), 4 (15-19 times per day) and 5 (> 20 times per day).

For measuring the acceptable of use of Internet for personal purposes during work hours, a self-developed question is used (see Appendix C.1, question 19). A five-point Likert scale is used to measure the variable, rating from 1 (Strongly agree) to 5 (Strongly disagree). In the second phase, the senior management were asked the similar question (see Appendix C.2, question 7).

For measuring the acceptable of use of Internet for personal purposes after work hours, a self-developed question is used (see Appendix C.1, question 21). A five-point Likert scale is used to measure the variable, rating from 1 (strongly agree) to 5 (strongly disagree). In the second phase, the senior management are asked the similar question (see Appendix C.2, question 10).

To measure the senior management and staff members’ perceptions concerning the knowledge of the Internet usage policy, two questions are asked (see Appendix C.1, questions 24 and 25). In the second phase, the senior management are asked the similar question (see Appendix C.2, questions 2 and 3).

3.3 Data Collection

The study targeted a sample of University of Otago employees. The participants consisted of academic, general and contract staff members in the University of Otago. According to the statistical profile published on the University of Otago’s website, the total number of employees in this sample was 3749 staff (The University of Otago, 2011). Convenience sampling was used to select the sample.

3.3.1 Sample size consideration

Sample size consideration is necessary in order to establish a representative sample for generalizability (Cvana et al., 2001). Cavana and colleagues (2001) state that an
appropriate sample size is required to measure the precision and confidence level of the sample. Based on the sample size table from Conroy (2012, p. 4) (reproduced below as Table 1), a sample size of 165 participants would have a margin of error of approximately ± 7.5% for a ‘5000’ population with confidence levels at 95%. It would require 357 of participants for a margin of error of ± 5% for a ‘5000’ population. Therefore, the sample size of 198 participants (first phase) with a margin of error of approximately ± 7.5% is considered acceptable with the observation of over 165 or more participants. For the second phase, a sample size of 34 participants would require a margin of error of approximately ± 14% for a population of 131 with confidence levels at 95%.

Table 1: Sample size example table

<table>
<thead>
<tr>
<th>Acceptable Margin of Error</th>
<th>Size of population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>± 20%</td>
<td>24</td>
</tr>
<tr>
<td>± 15%</td>
<td>43</td>
</tr>
<tr>
<td>± 10%</td>
<td>96</td>
</tr>
<tr>
<td>± 7.5%</td>
<td>171</td>
</tr>
<tr>
<td>± 5%</td>
<td>384</td>
</tr>
<tr>
<td>± 3%</td>
<td>1067</td>
</tr>
</tbody>
</table>

3.3.2 Sampling

The data collection process was carried out in two phases, Phase 1 and Phase 2. The first phase of data collection involved participants from academic, general and contract staff members and the second phase of data collection involved participants from senior management. A sample size of the participants’ emails was collected from the Otago web contact directory. The total number of staff members in this target population was 3749 staff in year 2011 (The University of Otago, 2011). One thousand email addresses were randomly selected from the target population of 3749 staff. A formal email invitation to participate in the survey was sent to the target group, and data were collected from those who responded (Appendix B.1).
In the second phase, targeted participants of this study consisted of senior management from the University of Otago (i.e. Acting Associate Dean, Associate Dean, Deputy Dean, Dean, Head of Department, Director, Deputy Head Of Department and Acting Director) who are based on the Dunedin Campus. The sampling was selected from the University of Otago’s Dunedin Campus Contacts. The total number of senior management staff in this target group was 131 staff. A formal email invitation to participate in the survey was sent to the target group, and data were collected from those who responded (Appendix B.2).

3.3.3 Survey Procedure

This study involved human participation, thus a formal application for ethical approval (Category B) was submitted to and approved by the Head of the Department of Information Science at the University of Otago (Appendix A.1).

The first phase of the online survey was then pre-tested, and pilot tests were performed to validate the survey. As described earlier, the target population of 1000 staff members at the University of Otago were invited to participate in the online survey. The invitation email was sent through a blind carbon copy message to conceal each recipient’s email address. The email was sent from the internal email address so the University spam filter would not interfere with the message. The email explained the purpose of the study, a link to the survey, information sheet about the survey, and the researcher’s and research supervisor’s contacts details (i.e., name, email and phone number) in case the participants required further information.

In the information sheet, participants were informed that their participation was voluntary and that they could withdraw at any time during the survey. They were also informed that, in case they had any questions or they needed any more information regarding the study, they could contact the researcher or the researcher supervisors. Participants were assured that their personal information would remain confidential and anonymous. The results of the survey data were stored in a secure place.

By clicking the link provided in the email invitation, prospective participants would be forwarded directly to the first page of the online survey. If participants accepted the study
consent form terms (Appendix A.1) and agreed to take part in the study, they could click ‘Yes’ to the first question “I agree to take part in this project in the online survey”, which is an equivalent to a signature in consent form. The online survey was posted on the SurveyMonkey website for over two weeks, from 9 November 2011 to 23 December 2011. The raw data was analysed with Microsoft Excel and SPSS 22.0 software.

For the second phase of the online survey, the target population was senior management at the University of Otago. The total number of 131 senior management staff at the University of Otago was invited to participate in the online survey. The researcher sent an individual email to each recipient (Appendix B.2). The email was sent from the internal email address so the University spam filter would not interfere with the message. The email explained the purpose of the study, a link to the survey and information sheet about the survey.

By clicking the link provided in the email invitation, prospective participants would be forwarded directly to the first page of the online survey. If participants accepted the study consent form terms (Appendix A.2) and agreed to take part in the study, then they could click ‘Yes’ to the first question “I agree to take part in this project in the online survey”, which is an equivalent to a signature in consent form. Participants were informed that their participation was voluntary and that they could withdraw at any time during the survey. They were also informed that, in the case that they had any questions or they needed any more information regarding the study, they could contact the researcher or the research supervisors. Participants were assured that their personal information would remain confidential and anonymous.

The online survey was posted on the SurveyMonkey website for one week, from 23 May 2012 to 31 May 2012 and extended for another week until 6 June 2012. The raw data was analysed with Microsoft Excel and SPSS 22.0 software.
3.4 Instrument validity

Prior to posting the questionnaire on the Internet, the surveys were first pre-tested with three staff members from Information Science department and three postgraduate students. While no major problem was detected, several minor modifications were made based on the feedback regarding clarity and inconsistency of some items as well as the overall presentation of the survey. No major adverse comments were raised in the second round of pre-testing. Thus, the surveys were ready for answering by actual respondents.

3.5 Data Analysis

The collected data from the SurveyMonkey were saved in Microsoft Excel and SPSS format. The data in Excel and SPSS were checked and any incomplete data was removed. A series of tables and histograms were produced to represent the data.

The data used in SPSS (Statistical Package for the Social Sciences) was for advanced statistical analysis. The Mann-Whitney U test is a non-parametric test (i.e., if the data are not normally distributed) that is used to compare differences between two independent groups (Field, 2009). For the second phase, a series of tables and histograms were produced to represent the data. The open-ended questions are analysed using content analysis. “Content analysis is the process of identifying, coding and categorising the primary pattern in the data” (Cavana et al., 2001, p. 171).

3.6 Summary

Chapter 3 presented the overall research design of this study. The research method, research design, data collection, instrument validity and data analysis were discussed in the chapter. Chapters 4 and 5 will present the results of the data analysis for Phase 1 and Phase 2. Descriptive statistics will be used to categorise the data from the respondents. In Phase 1, a Mann-Whitney U test will be used to compare the demographic groupings. In phase 2, descriptive statistics will be used to categorise the data from the respondents. Comments from the respondents will be included in the data analysis.
CHAPTER 4: DATA COLLECTION AND ANALYSIS (PHASE 1)

This chapter presents the results and explains in detail how the collected data is analysed. It includes participants’ demographic details, exploratory data analysis, research hypothesis and other findings.

4.1 Participants’ Demographics

As mentioned in Chapter 3, the target population for the first phase was staff members (academic, general and/or contractor) at the University of Otago. The online survey was posted for over two weeks, from 9 November 2011 to 23 December 2011. A total of 227 responses were received with 29 incomplete responses, leaving only 198 for data analysis. For all respondents (n=198), 95% confidence intervals varied by approximately ±6.9 percentage points. As stated in section 3.3.1 on page 20, a sample size of 165 would have a margin of error of approximately ±7.5% and a sample of 198 is well below ±7.5%, which is considered appropriate for this research. The 95% confidence level means that the true percentage of the population is between 43% and 57%. The overall response rate was 19.8%. The response rate was slightly lower than expected. This could be due to the University’s staff being on leave during the semester break. The other reason could be some staff did not check their email regularly. Another reason could be that some staff lacked interest in this survey.

The analysis showed that the majority of the respondents (60%; n =119) were females while 40% (n=79) were males. According to the University of Otago staff statistics report, the total number of university staff in 2011 was 3749. The report indicated that 57% (n=2142) of the staff were females, and 43% (n=1606) of the staff were males (The University of Otago, 2011). This showed that the distribution of the staff in the study sample was consistent with the gender distribution of the staff population of the University of Otago. In the following tables and figures, the results are based on self-reported assessment rather than actual behaviours from the respondents. The percentage figures below 5% are shown in the figures that follow, but are not discussed, since they fall below the 7% margin of error.
Figure 1 showed the number of staff (n=198) by age. The majority of the staff was aged 40 years or more (68%), while the smallest age group was 18 year to 29 years (7%). In Figure 2, the majority of the respondents are holding general (including contractor or other) positions (54%) while the remaining respondents are holding academic position (46%).

Figure 1: Age group

![Bar chart showing age distribution.]

Figure 2: Job classification

![Bar chart showing job classification.]

25
In Figure 3, most respondents have been in their current position for over 10 years (32%) and 2-5 years (33%). Only 18% of the respondents have been in their current position less than 2 years. In Figure 4, the majority of the respondents had over 10 years (87%) of experience in using the Internet, followed by 6-10 years (9%) of experience.

Figure 5 showed the average time the respondents spent each week accessing the Internet for work purpose during work hours. The majority of the respondents spent on average 1-3 hours per day (55%) for work purposes while 17% of the respondents spent less than an hour. Only a minority of the respondents spent over 6 hours per day (9%).

Figure 3: Current position
Figure 4: Years of Internet experience (work and personal)

![Bar chart showing years of Internet experience](image)

Figure 6 shows that the majority of the respondents (n=198) spent on average less than an hour (52%) accessing the Internet for personal use during work hours in a week. This was followed by 31% of the respondents who spent on average 1-3 hours. Only 9% of the respondents did not use the Internet for personal purposes. A few of the respondents spent over 4 hours per week (7%). The overall results aligned with the University’s Internet policy, which allows staff to access the Internet for personal purposes up to a maximum of three hours per week.
Figure 5: Average time spend in accessing the Internet for work

How much time, on average, do you spend accessing the Internet for work purposes during work hours in a day?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>9%</td>
</tr>
<tr>
<td>&lt; 1 hour</td>
<td>52%</td>
</tr>
<tr>
<td>1-3 hours</td>
<td>31%</td>
</tr>
<tr>
<td>4-5 hours</td>
<td>7%</td>
</tr>
<tr>
<td>6+ hours</td>
<td>1%</td>
</tr>
</tbody>
</table>

Figure 6: Average time spend in accessing the Internet for personal purposes

How much time, on average, do you spend accessing the Internet for personal use during work hours in one week?

<table>
<thead>
<tr>
<th>Hours</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>9%</td>
</tr>
<tr>
<td>&lt; 1 hour</td>
<td>52%</td>
</tr>
<tr>
<td>1-3 hours</td>
<td>31%</td>
</tr>
<tr>
<td>4-5 hours</td>
<td>7%</td>
</tr>
<tr>
<td>6+ hours</td>
<td>1%</td>
</tr>
</tbody>
</table>
4.2 Internet activities of staff members at work

In Table 2, 42% of the respondents (n=198) accessed a social network website 1-4 times per day while almost 52% never accessed social network websites. Twenty-seven percent of them used social network websites as part of their work 1-4 times per day while the majority of them never used the social network websites as part of their work (70%). More than half of the respondents (54%) accessed research materials 1-4 times per day during working hours, and 26% accessed research material 5-14 times per day. Only a minority of the respondents (7%) accessed research materials more than 20 times per day.

The percentage of the respondents who did not use personal web-based email during work hours (46%) was almost equivalent to the percentage of the respondents who did use personal web-based email during work hours (43%). Only two percent of them used personal web-based email during working hours 15 times per day and more. A majority of the respondents (71%) sent or forwarded non-work-related email during working hours 1-4 times per day while 21% never did. Almost two-third of the respondents read online news, sports, weather, etc., during work hours (73%). However, the respondents spent no time reading travel and leisure web sites for non-work-related activities (73%). Only one-fourth of the respondents (25%) read travel and leisure web sites for non-work-related activities 1-4 times per day.

Slightly more than a quarter of the respondents shopped online 1-4 times per day while 71% never did. Fifty-three percent of the respondents conducted personal investment and banking activities during working hours 1-3 times per day while 47% never did. Twenty-seven percent of respondents downloaded and/or viewed video, audio and picture for personal entertainment during working hours while the majority of the respondents never did (73%). Almost all of the respondents never visited adult-oriented (sexually explicit) websites during work hours.
Table 2: Distribution of responses to survey questions related to the Internet activities

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Never</th>
<th>1-4 times per day</th>
<th>5-14 times per day</th>
<th>15-19 times per day</th>
<th>&gt; 20 times per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Accessed social network sites such as Facebook, Twitter and the like</td>
<td>52</td>
<td>42</td>
<td>5</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8. Used social network sites as part of your work</td>
<td>70</td>
<td>27</td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9. Accessed research materials</td>
<td>9</td>
<td>54</td>
<td>26</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>10. Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc</td>
<td>46</td>
<td>43</td>
<td>9</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>11. Sent or forwarded non-work-related email</td>
<td>21</td>
<td>71</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>12. Read online news, sports, weathers, etc</td>
<td>17</td>
<td>73</td>
<td>9</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>13. Read travel and leisure web sites for non-work related activities</td>
<td>73</td>
<td>25</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14. Shopped online</td>
<td>71</td>
<td>28</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15. Conducted personal investment and banking activities</td>
<td>47</td>
<td>53</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>16. Downloaded and/or viewed video, audio, picture for personal entertainment</td>
<td>73</td>
<td>27</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17. Scanned through adult oriented (sexually explicit) web sites</td>
<td>99</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

4.3 Staff members’ perception of Internet activities at work

Table 3 showed that 40% of the respondents (n=198) agreed with the statement “it is appropriate to send non-work related email during work hours,” while 39% of the respondents were neutral. Eighty-six percent of the respondents strongly disagreed and disagreed with the statement “it is appropriate to create, access, store and display inappropriate material (e.g. sexually explicit materials, auction sites, dating sites, gambling sites, games and the like) outside work hours on work equipment.” More than half of the respondents strongly agreed and agreed (7% and 49% respectively) with the statement “it is appropriate to conduct personal use of the Internet outside work hours on work equipment,” while 31% answered neutral. Forty-seven percent of the respondents strongly
agree and agreed (7% and 40% respectively) with the statement “it is appropriate for the University to monitor personal use of the Internet and email during work hours.”

Table 3: Distribution of responses to survey questions related to personal perception of using the Internet

<table>
<thead>
<tr>
<th>Survey Questions</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>19. It is appropriate to send non-work-related email during work hours</td>
<td>7</td>
<td>40</td>
<td>39</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>20. It is appropriate to create, access, store and display inappropriate material (e.g. sexually explicit materials, auction sites, dating sites, gambling sites, games and the like) outside work hours on work equipment.</td>
<td>2</td>
<td>2</td>
<td>10</td>
<td>14</td>
<td>72</td>
</tr>
<tr>
<td>21. It is appropriate to conduct personal use of the Internet outside work hours on work equipment.</td>
<td>7</td>
<td>49</td>
<td>31</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>22. It is appropriate for the University to monitor personal use of the Internet and email during work hours.</td>
<td>7</td>
<td>40</td>
<td>25</td>
<td>17</td>
<td>11</td>
</tr>
</tbody>
</table>

4.4 Staff members’ understanding and views of the Internet usage policy

The majority of the respondents (93%, n=198) were aware of the Internet usage policy implemented at the University of Otago while a small percent (6%) of the respondents were unaware of the policy (see Figure 7). (Note: All respondents who answered “No” or “Don’t know” will subsequently skip the next three questions).

Figure 8 showed that 79% of the respondents chose the statement “allows limited personal use of the Internet access to non-work-related activities,” while 10% of the respondents were unsure. In Figure 9, half of the respondents agreed that the Internet usage policy is a
good policy while 25% of the respondents were neutral. Only 8% of the respondents disagreed that the Internet usage policy is a good policy.

Figure 7: Awareness of the Internet usage policy

![Chart showing awareness of the University of Otago's Internet usage policy. 93% of respondents know of the policy, with 1% selecting 'no' and 6% 'don't know'.]

Figure 8: The University of Otago’s Internet usage policy

![Chart showing the University of Otago’s Internet usage policy options. 79% of respondents select 'allows unlimited personal use', 4% 'allows limited personal use', 10% 'strictly prohibits personal use', and 6% 'don't know'.]
Figure 10 showed that the implementation of the Internet usage policy does not have any impact on the respondent’s job performance. Forty-four percent of the respondents agreed with the statement. Twenty-two percent of the respondents disagreed while 20% responded neutral. Figure 11, 13% of the respondents agreed that the University of Otago could not identify the people who are accessing the Internet while 72% of the respondents believed that the University is capable of identifying the users. Only 15% of the respondents were unsure.

Figure 9: Do you believe the Internet usage policy is a good policy?

Figure 10: Impact of the Internet usage policy on respondent’s job performance
Figure 12 showed that the majority of the respondents (94%) have not been to a formal presentation regarding the University of Otago Internet policy. A small percentage of the respondents (6%) had attended the presentation.

Figure 11: University of Otago can identify user’s Internet activities

![Bar chart showing the University of Otago cannot identify the people who are accessing the Internet.](chart1

Figure 12: Formal presentation on the University of Otago Internet policy

![Bar chart showing Have you been to a formal presentation on the University of Otago Internet policy?](chart2)
4.5 Results and Reports

Before the researcher uses advanced statistics to explain the results, the assumption must be made such that the variables are normally distributed (Field, 2009). As shown in early results (see Table 2 and Table 3) a non-parametric signed rank test is suitable for the present purpose, as the present data is not normally distributed (see Appendix D). A Mann-Whitney U test is a nonparametric method designed to detect differences between two independent groups, but not normally distributed (Field 2009). According to Field (2009), the effect size allows people to have a more generalised observed description of the size of an effect. According to Coolican (2009, p. 395), “the Cohen’s guidelines for \( r \) are that a large effect is .5, a medium effect is .3, and a small effect is .1”. The calculation of the effect size of Mann-Whitney’s U test is as follow:

\[
r = \frac{Z}{\sqrt{N}}
\]

in which the \( z \) is the \( z \)-score that SPSS produces and \( N \) is the sample size of the study (Field, 2009, p. 550).

Research question 1: What are the differences in perception between staff members about the monitoring of personal web usage and email during work hours based on gender and job classification?

A Mann-Whitney \( U \) test was conducted to test the null hypothesis that there would be no difference in monitoring personal use of the Internet and email during work hours between males and females. It is observed that \( p = .724 \), which exceeds the null hypothesis \( (p \leq .05) \). There is not enough evidence to reject the null hypothesis (see Table 4). The test showed that there is no difference in perception between males and females in terms of monitoring personal web usage and email during work hours.

Similarly, a Mann-Whitney \( U \) test was conducted to test the null hypothesis that there would be no difference in monitoring personal use of the Internet and email during work
hours between general and academic staff. It is observed that $p = .093$, which exceeds the null hypothesis ($p <= .05$). There is not enough evidence to reject the null hypothesis (see Table 5). The test showed that there is no difference in perception between general and academic staff in terms of monitoring personal web usage and email during work hours.

Table 4: Research question 1 result of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>It is appropriate for the University to monitor personal use of the Internet and email during work hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4567.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>11707.500</td>
</tr>
<tr>
<td>Z</td>
<td>-.352</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.724</td>
</tr>
</tbody>
</table>

Table 5: Research question 1 result of Mann-Whitney U analysis of job classification

<table>
<thead>
<tr>
<th></th>
<th>It is appropriate for the University to monitor personal use of the Internet and email during work hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4222.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>10000.500</td>
</tr>
<tr>
<td>Z</td>
<td>-1.682</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.093</td>
</tr>
</tbody>
</table>

Research question 2: What are the differences in perception between staff members concerning the impact of the Internet usage policy on job performance based on gender and job classification?

A Mann-Whitney $U$ test was conducted to test the null hypothesis that there would be no difference in perception about the impact of the Internet usage policy on job performance between males and females. It is observed that $p = .583$, which exceeds the null hypothesis ($p <= .05$). There is not enough evidence to reject the null hypothesis (see Table 6). The
test showed that there is no difference in perception between males and females in terms of the impact of the Internet usage policy on job performance.

A Mann-Whitney U test was conducted to test the null hypothesis that there would be no difference in perception about the impact of the Internet usage policy on job performance between general and academic staff. It is observed that the test statistic rejected the null hypothesis, $z = -2.222$, $p = .026$ and effect size $r = -.16$, where the average ranks are 108.79 and 91.60 for academic and general, respectively (see Table 7). The result of the test showed that the perception concerning the impact of the Internet usage policy on job performance is greater for academic staff than general staff.

Table 6: Research question 2 result of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>The implementation of the Internet usage policy does not have any impact on my job performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4495.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>7655.500</td>
</tr>
<tr>
<td>Z</td>
<td>-.549</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.583</td>
</tr>
</tbody>
</table>

Table 7: Research question 2 result of Mann-Whitney U analysis of job classification

<table>
<thead>
<tr>
<th></th>
<th>The implementation of the Internet usage policy does not have any impact on my job performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4023.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>9801.500</td>
</tr>
<tr>
<td>Z</td>
<td>-2.222</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.026</td>
</tr>
</tbody>
</table>

Research question 3: Does gender and/or job classification have an effect on the Internet usage?

Research question 3a: What are the differences in frequency of usage of the Internet for personal purposes between staff members based on the gender and job classification?
A Mann-Whitney $U$ test was conducted to test the null hypothesis that there would be no difference in frequency of usage of the Internet for personal purposes between males and female. The results of the test showed that there is not enough evidence to reject the null hypothesis (see Table 8 and Table 9). The test showed that there is no difference in Internet usage for personal purposes between males and females.

A Mann-Whitney $U$ test was conducted to test the null hypothesis that there would be no difference in frequency of usage of the Internet for personal purposes between general and academic staff. Three Internet activities rejected the null hypothesis.

It is observed that “accessed research materials” rejected the null hypothesis, $z = -6.097, p = .000$ and effect size $r = -.43$, where the average ranks are 123.99 and 78.67 for academic and general respectively (see Table 10).

Secondly, it is observed that “read online news, sports, weathers, etc.” rejected the null hypothesis, $z = -2.591, p = 0.10$ and $r = -.18$, where the average ranks are 90.57 and 107.10 for academic and general respectively (see Table 10).

Lastly, it is observed that the “download and/or viewed video, audio, picture for personal entertainment” rejected the null hypothesis, $z = -2.497, p = 0.13$ and $r = -.18$, where the average ranks are 90.99 and 106.173 for academic and general respectively (see Table 11).

The results of the test showed that the academic staff are more likely to access research materials than general staff. The general staff are more likely to read online news, sports, weather, etc., and download and/or viewed video, audio, picture for personal entertainment than academic staff. However, it is not enough evidence to reject the null hypothesis for all other questions (see Table 10 and Table 11).
Table 8: Research question 3a results of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>Accessed social network sites such as Facebook, Twitter and the like</th>
<th>Used social network sites as part of your work</th>
<th>Accessed research materials</th>
<th>Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc</th>
<th>Sent or forwarded non-work-related email</th>
<th>Read online news, sports, weathers, etc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4674.000</td>
<td>4668.000</td>
<td>4389.500</td>
<td>4481.500</td>
<td>4389.500</td>
<td>4118.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>7834.000</td>
<td>7828.000</td>
<td>11529.500</td>
<td>11621.500</td>
<td>7549.500</td>
<td>11258.500</td>
</tr>
<tr>
<td>Z</td>
<td>-.076</td>
<td>-.103</td>
<td>-.866</td>
<td>-.612</td>
<td>-.987</td>
<td>-.1887</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.940</td>
<td>.918</td>
<td>.387</td>
<td>.540</td>
<td>.324</td>
<td>.059</td>
</tr>
</tbody>
</table>

Table 9: Research question 3a results of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>Read travel and leisure web sites for non-work-related activities</th>
<th>Shopped online</th>
<th>Conducted personal investment and banking activities</th>
<th>Downloaded and/or viewed video, audio, picture for personal entertainment</th>
<th>Scanned through adult oriented (sexually explicit) web sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4659.500</td>
<td>4123.500</td>
<td>4591.000</td>
<td>4160.500</td>
<td>4641.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>7819.500</td>
<td>7283.500</td>
<td>11731.000</td>
<td>11300.500</td>
<td>11781.000</td>
</tr>
<tr>
<td>Z</td>
<td>-.134</td>
<td>-.1862</td>
<td>-.321</td>
<td>-.773</td>
<td>-.1227</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.893</td>
<td>.063</td>
<td>.748</td>
<td>.076</td>
<td>.220</td>
</tr>
</tbody>
</table>
Table 10: Research question 3a results of Mann-Whitney U analysis of job classification

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mann-Whitney U</th>
<th>Wilcoxon W</th>
<th>Z</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessed social network sites such as Facebook, Twitter and the like</td>
<td>4836.000</td>
<td>9022.000</td>
<td>.091</td>
<td>.927</td>
</tr>
<tr>
<td>Used social network sites as part of your work</td>
<td>4837.000</td>
<td>9023.000</td>
<td>.098</td>
<td>.922</td>
</tr>
<tr>
<td>Accessed research materials</td>
<td>2640.000</td>
<td>8418.000</td>
<td>-6.097</td>
<td>.000</td>
</tr>
<tr>
<td>Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc</td>
<td>4860.000</td>
<td>9046.000</td>
<td>-.023</td>
<td>.981</td>
</tr>
<tr>
<td>Sent or forwarded non-work-related email</td>
<td>4752.500</td>
<td>8938.500</td>
<td>-.362</td>
<td>.718</td>
</tr>
<tr>
<td>Read online news, sports, weathers, etc</td>
<td>4055.500</td>
<td>8241.500</td>
<td>-2.591</td>
<td>.010</td>
</tr>
</tbody>
</table>

Table 11: Research question 3a results of Mann-Whitney U analysis of job classification

<table>
<thead>
<tr>
<th>Activity</th>
<th>Mann-Whitney U</th>
<th>Wilcoxon W</th>
<th>Z</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read travel and leisure web sites for non-work-related activities</td>
<td>4671.000</td>
<td>8857.000</td>
<td>-.635</td>
<td>.525</td>
</tr>
<tr>
<td>Shopped online</td>
<td>4343.500</td>
<td>8529.500</td>
<td>-1.664</td>
<td>.096</td>
</tr>
<tr>
<td>Conducted personal investment and banking activities</td>
<td>4795.000</td>
<td>10573.000</td>
<td>-.212</td>
<td>.832</td>
</tr>
<tr>
<td>Downloaded and/or viewed video, audio, picture for personal entertainment</td>
<td>4094.500</td>
<td>8280.500</td>
<td>-2.497</td>
<td>.013</td>
</tr>
<tr>
<td>Scanned through adult oriented (sexually explicit) web sites</td>
<td>4823.000</td>
<td>9009.000</td>
<td>-.922</td>
<td>.356</td>
</tr>
</tbody>
</table>
Research question 3b: To what extent do staff members differ in perception about the acceptable use of the Internet for personal purposes during work hours based on gender and job classification?

A Mann-Whitney $U$ test was conducted to test the null hypothesis that there would be no difference in perception of using the Internet for personal purposes during work hours between males and females. It is observed that the test statistic rejected the null hypothesis, $z = -2.601, p = .009$ and effect size $r = -.18$, where the average ranks are 87.34 and 107.58 for males and females respectively (see Table 12). The test showed that the perception of using the Internet for personal purposes during work hours is greater for females than males.

A Mann-Whitney $U$ test was conducted to test the hypothesis that there would be no difference in perception of using the Internet for personal purposes during work hours between general and academic staff. It is observed that $p = .066$, which exceeds the null hypothesis ($p <= .05$). There is not enough evidence to reject the null hypothesis (see Table 13). The test showed that there is no difference in perception between general and academic staff in terms of using the Internet for personal purposes during work hours.

Table 12: Research question 3b result of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>It is appropriate to send non-work-related email during work hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>3739.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>6899.500</td>
</tr>
<tr>
<td>Z</td>
<td>-2.601</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.009</td>
</tr>
</tbody>
</table>

Table 13: Research question 3b result of Mann-Whitney U analysis of Job classification

<table>
<thead>
<tr>
<th></th>
<th>It is appropriate to send non-work-related email during work hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4177.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>8363.500</td>
</tr>
<tr>
<td>Z</td>
<td>-1.838</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.066</td>
</tr>
</tbody>
</table>
Research question 3c: To what extent do staff members differ in perception regarding the acceptable use of the Internet for personal purposes after work hours based on gender and job classification?

A Mann-Whitney $U$ test was conducted to test the hypothesis that there would be no difference in perception of using the Internet for personal purposes after work hours between males and females. It is observed that the test statistic rejected the null hypothesis, $z = -2.241$, $p = .025$ and effect size $r = -.16$, where the average ranks are 89.14 and 106.38 for males and females respectively (see Table 14). The test showed that the perception of using the Internet for personal purposes after work hours is greater for females than males.

A Mann-Whitney $U$ test was conducted to test the hypothesis that there would be no difference in perception of using the Internet for personal purposes after work hours between general and academic staff. It is observed that $p = .286$, which exceeds the null hypothesis ($p =< .05$). There is not enough evidence to reject the null hypothesis (see Table 15). The test showed that there is no difference in perception between general and academic staff in terms of using the Internet for personal purposes after work hours.

Table 14: Research question 3c result of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>It is appropriate to conduct personal use of the Internet outside work hours on work equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>3882.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>7042.000</td>
</tr>
<tr>
<td>Z</td>
<td>-2.241</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.025</td>
</tr>
</tbody>
</table>

Table 15: Research question 3c result of Mann-Whitney U analysis of job classification

<table>
<thead>
<tr>
<th></th>
<th>It is appropriate to conduct personal use of the Internet outside work hours on work equipment.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4472.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>8658.000</td>
</tr>
<tr>
<td>Z</td>
<td>-1.067</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.286</td>
</tr>
</tbody>
</table>
Research question 3d: To what extent do staff member differ in perception concerning the knowledge of the Internet usage policy based on gender and job classification?

A Mann-Whitney $U$ test was conducted to evaluate the hypothesis that there would be no difference in perception concerning the knowledge of the Internet usage policy between male and female. There is not enough evidence to reject the null hypothesis (see Table 16). The test showed that there is no difference in perception between males and females in terms of knowledge of the Internet usage.

Mann-Whitney $U$ test was conducted to evaluate the hypothesis that there would be no difference in perception concerning the knowledge of the Internet usage policy between general and academic staff. It is observed that “University of Otago’s Internet usage policy” rejected the null hypothesis, $z = -2.506$, $p = .012$ and effect size $r = -.18$, where the average ranks were 107.40 and 92.78 for academic and general staff respectively (see Table 17). The test showed that the perception concerning the knowledge of the Internet usage policy is greater for academic than general staff. However, there is not enough evidence to reject the null hypothesis for other questions.

Table 16: Research question 3d result of Mann-Whitney U analysis of gender

<table>
<thead>
<tr>
<th></th>
<th>Does the University of Otago have an Internet usage policy?</th>
<th>The University of Otago's Internet usage policy</th>
<th>Do you believe the Internet usage policy is a good policy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4479.000</td>
<td>4257.500</td>
<td>4173.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>7639.000</td>
<td>7417.500</td>
<td>7333.000</td>
</tr>
<tr>
<td>Z</td>
<td>-1.307</td>
<td>-1.572</td>
<td>-1.443</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.191</td>
<td>.116</td>
<td>.149</td>
</tr>
</tbody>
</table>
Table 17: Research question 3d result of Mann-Whitney U analysis of job classification

<table>
<thead>
<tr>
<th></th>
<th>Does the University of Otago have an Internet usage policy?</th>
<th>The University of Otago's Internet usage policy</th>
<th>Do you believe the Internet usage policy is a good policy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>4664.000</td>
<td>4149.500</td>
<td>4481.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>10442.000</td>
<td>9927.500</td>
<td>10259.500</td>
</tr>
<tr>
<td>Z</td>
<td>-1.186</td>
<td>-2.506</td>
<td>-1.040</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.236</td>
<td>.012</td>
<td>.298</td>
</tr>
</tbody>
</table>

4.6 Summary

This chapter has presented the analysis from the first phase of data collection. The results were presented in tables and graphs. The staff members’ demographic details, Internet activities, perception of the Internet activities and understanding and views on the current Internet usage policy were presented. The Mann-Whitney analysis was used to test for differences in perceptions between gender and job classification. The following Chapter 5 will discuss the findings from the second phase. The descriptive statistics were used to categorise the data from the respondents.
CHAPTER 5: DATA COLLECTION AND ANALYSIS (PHASE 2)

This chapter presents the findings from the second phase of data collection using an online survey with a small sample of senior management at the University of Otago.

5.1 Population, Sample and Respondents

The targeted participants of this study consisted of senior management (e.g. Associate Dean, Dean, Head of Department, Director, and Deputy Director) from the University of Otago who are based on the Dunedin Campus. The sampling was self-selected from the University of Otago’s Dunedin Campus Contacts. The researcher decided to withdraw the demographics details such as age, gender and job classification. The researcher believed that the participants are homogenous in terms of age and responsibilities. According to University ethical rules, all participants’ identity must be keep anonymous. A total of two respondents completed half of the questions and were removed from the data analysis. Because of unknown reasons with the SurveyMonkey website, a total of 17 respondents skipped three questions (question 6 to 8) when answering the survey. The researcher decided to include the 17 respondents in the data analysis as they did complete the rest of the questions. A total of 34 usable responses were included in the analysis. The online survey was posted using Survey Monkey for one week, from 23 May 2012 to 31 May 2012, and extended for another week until 6 June 2012.

An invitation email was created to ask for participation in the research study (See Appendix C). The email contained some general information about the nature of the survey, a link to the online survey, an information sheet, and a consent form (see Appendix B). By clicking the link provided in the email, the participants would be diverted to the first page of the online survey. If the participant accepted the study consent forms, he or she could proceed to the questionnaire once he or she chose yes, “I agree to take part in this project”. The process is equivalent to a signature on a consent paper.
5.2 Analysis of the Data

The following subsections present the results of Phase 2’s questionnaire (see Appendix C).

5.2.1 Senior management’s roles and knowledge of the Internet usage policy

In Figure 13, 94% of the respondents were aware of the Internet usage policy implemented at the University, as opposed to 6% of the respondents who were unaware. Of those respondents who knew the IUP, only two had the chance to organise and discuss the Internet usage policy with their respective departments. When asked about the clarity of the IUP, 91% of the respondents agreed that it is easy to understand (see Figure 14). However, 94% of the respondents were not responsible for organising any training on this policy (see Figure 15). Only two respondents discussed the policy during departmental meetings. With reference to open question 5, who/which department is responsible for conducting the training relating to the University’s IUP, almost half of the respondents (46%) were unsure if the training was required. Only 26% of the respondents considered it was the responsibility of the Information Technology Services, 9% under Human Resources and the remaining 14% though that it was not required at all (see Table 18).

Figure 13: Response to survey 2 question 2
Figure 14: Response to survey 2 question 3

![Chart showing the percentage of respondents who think the Internet usage policy is easy to understand. 91% of respondents answered Yes, 3% answered No, and 6% answered Other.]

Figure 15: Response to survey 2 question 4

![Chart showing the percentage of respondents who have organised any training on the Internet policy in their department. 94% of respondents answered Yes, and 6% answered No.]

With reference to survey question 8, the staff knew about the presence of the policy from various sources: staff emails, staff meetings, word of mouth, department memos and hard copy (see Table 19). However, some of the respondents were unsure how the policy was being distributed. Approximately half of the respondents did not answer the question because of unknown issues with the SurveyMonkey website.
Table 18: Response to survey 2 question 5

<table>
<thead>
<tr>
<th>Department</th>
<th>Frequency</th>
<th>Percentage (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>ITS</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>HR</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Unsure</td>
<td>16</td>
<td>46</td>
</tr>
<tr>
<td>Skipped</td>
<td>2</td>
<td>6</td>
</tr>
</tbody>
</table>

* Note that some of the participants provided multiple answers.

Table 19: Response to survey 2 question 8

<table>
<thead>
<tr>
<th>Methods</th>
<th>Frequency</th>
<th>Percentage (%)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Print out copy</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Staff meeting</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Word of mouth</td>
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<tr>
<td>Unsure</td>
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<tr>
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<td>3</td>
</tr>
<tr>
<td>Skipped</td>
<td>17</td>
<td>49</td>
</tr>
</tbody>
</table>

*Note that some of the participants provided multiple answers.

The results of this study show that majority of the respondents (88%) were not involved in the development of the IUP (see Figure 16) but some of the respondents were involved in consultation at divisional meetings and provided feedback prior to the policy being implemented.
5.2.2 Senior management’s evaluation of the Internet Usage Policy

In Figure 17, 15% of the respondents had encountered some incidents about their staff members abusing Internet privileges prior to the implementation of IUP. Consequently, the HR department issued a warning letter for minor offences about their unethical behaviour while one of the staff was sacked because of serious offences. More than one-third of the respondents had not encountered any incidents prior to the implementation of IUP. Half of the respondents did not answer the question because of an unknown issue with the SurveyMonkey website.

On the other hand, after the implementation of IUP, about one-fourth of the respondents (24%) had encountered some violations of the Internet usage policy. The offenders were either warned or referred to their superior. As for the rest of the respondents (76%), no violations were reported within the department/division (see Figure 18).
In question 14, the respondents were asked to describe the major factors that could influence the success of a new policy. The thematic analysis was used to recognise, analyse and report the common themes within data (Braun & Clarke, 2006). To avoid potential bias through the researcher's own values and familiarity with the quantitative data, the researcher's supervisor was involved in parts of the qualitative analysis. This allowed the researchers to discuss and agree on the category description. The researchers
categorised the open-ended questions into different themes. The researchers identified four categories: clarity, communication, consultation and training.

A number of respondents (n= 13) commented that clarity of the content was one of the most influential factors that a new policy should embrace. The contents of the policy should be unambiguous, simple and easy to understand. The contents of the policy must be feasible and make sense so that the staff can follow the instructions or guidelines.

“That folks understand the reason for the policy; That the policy passes the 'reasonableness' test; That it is concise and understandable.”

"simplicity and common sense; recognition of best practice, especially where it already exists as normal for most people"

"I think that they must make sense to staff - ie have an inherent logic and a clear rationale…”

"Clear and easily understandable statement of the policy. Appropriate communication of the policy…”

"easy to understand, common sense, morally defensible"

Besides that, communication (n=8) was another factor that influences the success of the policy. Clear communication was important to ensure that the information conveyed to the staff was well received and understood. Any communication breakdown will lead to undesired consequences such as confusion or misunderstanding of the policy.

“Extensive communication concerning the need for the policy, simple explanation of the policy, examples of compliance and non-compliance”

“Good communication, sensble [sic] policies”

“communication of the policy and acceptance by university staff”
The respondents think that consultation (n=6) was another factor that influences the success of the policy. An acceptable policy is more easily achieved when everyone involved communicates with each other to provide feedback on policy proposals.

“Wide consultation with all staff before the implementation of the policy and wide consultation with staff after adoption of the policy.”

“Consultation prior to implementation. Thorough communication to appropriate areas…”

“…opportunity for feedback prior to implementation”

Nevertheless, a new policy will not be effective if the staff were unaware of the policy (n=3). The best way to raise the awareness of the Internet usage policy is through educating the staff. Through education, the staff will understand the objective of the policy and also the impact of the policy on organisation and individual.

“…training – where the implementation of the policy will have an impact on current practices”

“Publicity +/- training sessions”

“Raising awareness and appropriate training”

Only one individual has a neutral opinion that the current policy was neither good nor bad.

“Hard to judge. My impression is that there is too much beauracracy [sic] and not enough time for research.”

From the data in Figure 19, 38% of the respondents revealed that the monitoring tools and policy used within the University have a minor impact on individual decisions to abuse the Internet. Over one-fourth of the respondents (27%) believed that the monitoring tools and policy have a major impact on individual decisions to abuse the Internet. Some respondents (29%) were unsure about the impact of the monitoring tools and policy.
As Figure 20 showed, only 3% of the respondents think that the Internet policy has a major impact on staff performance and 32% of the respondents think it has a minor impact on staff performance. Interestingly, more than half of the respondents think it has none (29%) and almost no (24%) impact on the staff performance. The following comments from respondents were some examples that illustrate other (12%):

“If staff are inclined to waste time, they can do it as easily at the water cooler as online. Any gain for the Uni [sic] is likely to be in bandwidth rather than staff time.”

“Blocking access some sites, and limiting access to others means that staff will not be able to use them during normal work hours. This can only improve staff performance.”
5.2.3 Senior management’s perception of personal web usage

In Figure 21, 35% of the respondents think that it is appropriate for the staff to access the Internet for personal purposes during work hours. The respondents think that the staff should access the Internet in moderation and that this should not interrupt their job function. On the other hand, 15% of the respondents disagreed about accessing Internet for personal purposes. Half of the respondents skipped the question because of an unknown issue.
In Figure 22, 47% of the respondents think that it is appropriate for the staff to access the Internet for personal purposes after work hours. The respondents think that the staff should follow the University’s policies and guidelines, whereas inappropriate sites (e.g., illicit contents) should be prohibited. One of the respondents who disagreed with the statement think that the staff should be prohibited from using University computers to access the Internet at all. Another respondent believed that the staff should use their home connection for personal things. Half of the respondents skipped the question because of an unknown issue. Only 3% of the respondents disagreed about accessing Internet for personal purposes after work hours. The following comments from respondents were some examples that illustrate this point:

“Within reason, as long as it is not to inappropriate sites or being involved in inappropriate activities or includes excessive downloads [sic] which become a cost to the University”

“As long as it does not contravene other aspects of the policy“

“I would rather staff were not using work computers at all to access the internet for personal use”

Figure 21: Response to survey 2 question 7
As shown in Figure 23 the respondents who had supported the use of the Internet for personal purposes during work hours think that monitoring tools and policy have an impact (27%) on an individual decision to abuse the Internet. This suggests that individuals will continue to use the Internet for personal purposes but at the same time might be afraid of misusing the Internet. By doing so, this may lead him or her to unethical behaviour.

Figure 22: Response to survey 2 question 10
Figure 23: Distribution of responses to survey 2 question 7 and question 15

Distribution of responses to survey 2 question 7 and question 15

Do you think the monitoring tools and policy used within the University impact individual decisions to abuse the Internet?
Figure 24 showed that 21% of the respondents who had supported the use of the Internet for personal purposes during work hours think that the Internet policy had no or almost no impact on staff performance. This means that those who use the Internet for personal purposes during work hours could actually beneficial to a worker’s performance (Coker, 2011). The following comments from respondents were some examples that illustrate the moderate use of the Internet for personal purposes:

“I think that they shouldn't be spending a lot of time using the Internet for personal purposes as they are paid to be at work but brief use should be ok”

“provided this does not interrupt their normal function and attention to responsibilities”

“modest use only, minimum times, normally before and after normal working hours”

“yes and no. Its [sic] ok to check a bank balance or something critical. I would not condone long hours of personal use and have had occasion to talk to staff about that. I don’t [sic] think it is appropriate [sic] for example to be a trade me [sic] trader at work; and facebook [sic] personal pages definitely don’t need updating. Lunch breaks are fine”
Figure 24: Distribution of responses to survey 2 question 7 and question 16

Distribution of responses to survey 2 question 7 and question 16

Do you think the implementation of the Internet policy has any impact on staff performance?

<table>
<thead>
<tr>
<th>Category</th>
<th>Yes</th>
<th>No</th>
<th>Missing</th>
</tr>
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<td>None</td>
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<tr>
<td>Almost None</td>
<td>12%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>Minor</td>
<td>9%</td>
<td>9%</td>
<td>15%</td>
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<tr>
<td>Major</td>
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<td></td>
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<td>Other</td>
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<td>6%</td>
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</tbody>
</table>
As shown in Figure 25, the respondents who supported the use of the Internet for personal purposes after work hours think that monitoring tools and policy had an impact (56%) on an individual decision to abuse the Internet. The individual thinks that he or she might have bigger impact on abusing the Internet after work hours. This could be due to unrestricted access after work hours.

Figure 26 showed that the majority of the respondents who supported the use of the Internet for personal purposes after work hours think that the Internet policy has minor or almost no impact on staff performance. Those who disagree with using the Internet for personal purposes after work hours also feel this had almost no or no impact on staff performance.
Figure 25: Distribution of responses to survey 2 question 10 and question 15

Do you think the monitoring tools and policy used within the University impact individual decisions to abuse the Internet?

- None: 3%
- Almost None: 3%
- Minor: 35%
- Major: 21%
- Other: 29%

Yes
No
Figure 26: Distribution of responses to survey 2 question 10 and question 16

Do you think the implementation of the Internet policy has any impact on staff performance?

- **None**: 6%
- **Almost None**: 3%
- **Minor**: 32%
- **Major**: 3%
- **Other**: 12%

The distribution of responses shows that the majority of respondents (32%) believe there is a minor impact on staff performance.
In Figure 27, the respondents think that the top most problematic personal Internet activities during work hours were social networking (70%), sending/forwarding non-work-related emails (46%), and followed by downloading/viewing video, audio and picture (42%). Nearly one-third of the respondents think that adult-oriented material (33%) was least problematic. The least problematic personal Internet activities were reading online news, sports, weather (27%), and downloading software (21%). The results showed that the senior management believed the social networking sites were considered wasting of time and could bring security risks to the organisation (Gao et al., 2011).

One participant expressed that some of these Internet activities could be legitimately used for research.

“I think that all of the answers not ticked above (except non-work-related emails) could be legitimately used for research depending on the area of research.”

On the negative side, the respondents think that these activities were unethical, wasting University resources, time consuming and could potentially introduce security risk, such as computer viruses, to the University.

“These potentially take up the most time, and are most likely to include possibilities that are illegal/ inappropriate.”

“…social networking can consume vast amounts of time. Downloading [sic] can introduce viruses to the network…”

“Because these have an impact on others, either by cluttering their Inboxes or consuming bandwidth. (This would be true of downloading software too…”

63
Figure 27: Response to survey 2 question 17

* Note that these are multiple-choice answers so the total percent of cases do sum to more than 100.

5.3 Results and Reports

The exploratory analysis of the senior management revealed that the majority of them were aware of the Internet usage policy. They were neither responsible nor in charge of the enforcement of the Internet usage policy. With clear and unambiguous policy statements, they perceived that the awareness and training would reduce staff personal web usage. Another finding showed that the senior management were very supportive of allowing the staff member to access the Internet during work hours and after office hours (see Figure 21 and Figure 22). They stated that there was no restriction on using the Internet so long as the staff followed the University rules and regulations. The staff should use the Internet in reasonable hours during or after office hours. The senior management believed that the monitoring tools and policy had influenced staff decisions on whether to abuse the Internet (see Figure 19). However, they believed that the implementation of the Internet usage policy has no or minor impact on staff performance (see Figure 20). Lastly, the senior
management perceived social networking and personal communication were more intrusive than downloading software and viewing adult-oriented materials (see Figure 27).

5.4 Summary

This chapter has presented the findings from the second phase of data collection. The results were presented in tables and graphs. Senior management’s knowledge and perceptions of the Internet usage policy were discussed. The impact of the Internet usage policy on monitoring tools, policy and staff performance were presented. Cross tabulation tables were presented to compare the responses of the Internet usage for personal purposes during and after working hours. The following chapter is a summary of findings, conclusion, recommendation and limitation of this study.
CHAPTER 6: SUMMARY OF FINDINGS AND CONCLUSIONS

The final chapter includes findings, conclusions, limitations and suggestions for further research of this study. The purpose of the quantitative surveys is to investigate a tertiary institution’s staff perceptions about the Internet activity, the attitudes of staff about personal web usage during and after hours, the perception concerning the monitoring system, the staff knowledge about the Internet usage policy (IUP) and the impact of IUP on personal web usage on job performance.

The survey instruments were designed based on the literature review. The literature review includes non-work-related concepts such as personal web usage, Internet abuse, cyberloafing, Internet acceptable usage policy, electronic monitoring and controlling usage.

6.1 Findings

Research Question 1: What are the differences in perception of staff members about the monitoring personal web usage and email during work hours based on gender and job classification?

The study findings showed no difference in perception for both gender and job classification in terms of monitoring personal web usage and email during work hours for staff members (see Table 4 and Table 5). This means that both the gender and job classification have similar perceptions about the monitoring personal web usage and email during work hours. The results indicated that 47% of the participants agreed that it is appropriate for the University to monitor personal use of the Internet and email during work hours. As shown in previous studies (Eivazi, 2011), electronic monitoring is necessary to improve employee performance or productivity. On the other hand, the majority of the senior management perceive that the monitoring has an impact on the staff decision to abuse the Internet. They may think the likelihood of staff abusing the Internet may increase if they spend more time on the Internet for personal purposes.
**Research Question 2:** What are the difference in perception of staff members concerning the impact of the Internet usage policy on job performance based on gender and job classification?

The study findings showed that there is no difference in perception between males and females about the impact of the Internet usage policy on job performance. The results imply that both male and female staff perceived that the implementation of the Internet usage policy does not have any impact on their job performance (see Table 6). The result showed that only 22% of the participants believed the Internet usage policy has an impact on their job performance (see Figure 10).

The study showed that there is a difference in perception between academic and general staff concerning the impact of the Internet usage policy on job performance. The result suggested that academic staff are more likely to believe that the implementation of the Internet usage policy does not have any impact on their job performance (see Table 7). The value of the average rankings indicates that the academic staff (108.79) are less concerned about on-the-job performance than the general staff (91.60). This could be because the academic staff work around the clock, such as in the evening and weekends, when they can prepare their work at home. From the senior management perspective, the more than 50% of them believed that the Internet usage policy has no impact on the staff performance (see Figure 20).

**Research Question 3:** Does gender and/or job classification have an effect on the results?

**Research Question 3a:** What are the differences in the frequency of usage of the Internet for personal purposes based on gender and job classification?

The study showed that Internet usage for personal purposes is different between academic and general staff. The finding of the results showed that academic staff are more likely to use the Internet for accessing research materials (see Table 10). The findings are consistent with a prior study that show that a high percentage of academic staff use Internet for research materials (Ani et al., 2010). On the other hand, general staff are more likely to access non-work-related activities for personal purposes such as reading online news,
sports, weather, and downloading and/or viewing videos, audios, pictures for personal entertainment (see Table 10 and Table 11). The senior management reveal that downloading and/or viewing videos, audios, pictures for personal entertainment is ranked third of the problematic activities while reading online news, sports and weather is the least problematic activities as compared with social networking (see Figure 27). However, there is no disparity in frequency of personal use of the Internet between male and female. According to the findings of Smith’s (2008), there is no differences in Internet access between male and female. Teo and Lim (2000) found that males were more likely to use the Internet for free resources and product support than females.

**Research Question 3b:** To what extent do staff members differ in perception about the acceptable use of the Internet for personal purposes during office hours based on gender and job classification?

The study shows that there is a difference in perception between males and females in using the Internet for personal purposes during office hours. The finding shows that females are more likely to send non-work-related email during work hours than males (see Table 12). The senior management believes that sending/forwarding non-work-related email is the second highest of the problematic activities (see Figure 27). One of the reasons given was that emails could clutter their mailboxes. On the other hand, there is no difference in perception between academic and general staff in regards to using the Internet for personal purposes during office hours (see Table 13). This reveals that the academic and general staff have similar perceptions of using the Internet for personal purposes. As mentioned by Nwezeh (2010), the Internet is a useful resource for academic staff.

**Research Question 3c:** To what extent do staff members differ in perception regarding the acceptable use of the Internet for personal purposes after office hours based on gender and job classification?

The study reveals that there is a difference in perception between males and females about terms of using the Internet for personal purposes after office hours. The finding shows that females are more likely to use the Internet for personal purposes outside work hours on
work equipment than males (see Table 14). The majority of the senior management supported the use of the Internet for personal purposes provided that the staff use the Internet in moderation. However, there is no difference in perception between general and academic staff concerning the acceptable use of the Internet for personal purposes after office hours.

**Research Question 3d:** To what extent do staff members differ in perception concerning the knowledge of the Internet usage policy based on gender and job classification?

The study shows that there is a difference in perception between academic and general staff concerning the knowledge of the Internet usage policy. The findings showed that academic staff are more knowledgeable about the Internet usage policy than general staff (see Table 17). They know the Internet usage policy allows limited personal use of Internet access to non-work-related activities. The results did not show any differences in perception between males and females concerning the knowledge of the Internet usage policy (see Table 16). A majority of the staff and senior management are aware of the Internet usage policy. However, the study shows a lack of training provided to the staff. Almost 94% of the respondents did not attend any training or presentation.

**6.2 Conclusions**

The findings of this research study suggested that a majority of the staff and senior management are aware of the Internet usage policy (IUP) being implemented in the University. The results indicated that the University staff use the Internet daily for work purpose (see Figure 5). The majority of staff spend less than three hours per week accessing the Internet for personal purposes.

The staff and senior management perceived that the Internet usage policy is a good policy and easy to understand. They believed that the University could identify anyone who accesses the Internet through electronic monitoring tools. However, the results did not show any differences of perception about the monitoring personal web usage and email during work hour based on gender and job classification. Electronic monitoring could prevent the staff from abusing the Internet access and also protect the University from any
potential legal liabilities such as sexual harassment (Alampay & Hechanova, 2010). The results also revealed that academic staff are more comfortable with the monitoring system than general staff.

The results identified differences in the frequency of usage of Internet between academic and general staff. Academic staff are more likely to access the research materials than general staff while the general staff are more likely to read online news, sports, weathers, and downloaded and/or viewed videos, audios, and pictures for personal entertainment. The general staff are spending more time on accessing non-work-related activities than academic staff. On the other hand, the senior management are more concerned about the social networking and sending/forwarding non-work-related email than adult-oriented material. Moreover, the senior management and staff members think that it is unacceptable and inappropriate to access the objectionable sites (e.g., adult-oriented websites) in the workplace.

There are differences between general and academic staff on the frequency of usage of the Internet for personal purposes. The self-reported assessment revealed different patterns of Internet usage among the staff members and this assessment could help the University to identify staff behaviour and make adjustments to their monitoring system, if necessary.

The results showed that the academic and general staff might require freedom of accessing the Internet rather than restricted access, as previous studies showed that restricted Internet access may restrain the creativity of individuals (Martin & Freeman, 2003). The results also showed that the senior management did not involve themselves in implementing the Internet usage policy. It is important that the University communicate, promote and educate the staff members about such policy. Through these activities, it will enable the staff to understand and acknowledge the importance of the policy.
6.3 Limitations of the study

The study revealed some interesting results about the different perspective of senior management and staff members on using the Internet for personal purposes and the impact of the Internet usage policy. However, there are some limitations too.

This study was conducted with a sample of staff members who worked in the University of Otago. Therefore, the findings of the study are limited to a confined group of the population. It would be difficult to generalise the results to a population sample of the tertiary institutions in New Zealand.

The surveys were conducted based on the assumption that the respondents answered the questionnaire honestly. As the questions were based on self-reported items, it is possible that the results would be biased toward positive behaviours. The results of the projects may be published and will be available in the University of Otago Library, but every attempt will be made to preserve the participants’ anonymity.

In addition, this research is based on the activities that could be considered as general personal web usage norms among a huge spectrum of online activities that can be performed via the Internet and email. Hence, this research only covers limited online activities.

The response rates of both surveys were low compared with the total number of staff members in the target population. As discussed in Chapter 4, this could be due to the University’s staff being leave during semester break. Also, some staff members may have had lacked interest in this survey. Another reason could be due to the academics over worked.

Due to the unknown issue of the SurveyMonkey website, the respondents skipped three questions in the second survey, which restricted the interpretation of the sample data. The author has considered applying the weighting-class adjustments method to reflect the total sample population. However, the analysis could not proceed further without additional demographic or database data available for all members of the targeted sample group.
With smaller sample size and higher non-responses in survey 2, it could increase the margin of errors further. As a results, it affect the reliability of the sample. This limitation may lead to a possibility of error to generalise the results as a whole population.

Lastly, the researcher measured perceptions instead of actual behaviours. A study of actual behaviours of the respondents may yield different results.

### 6.4 Recommendations for further study

The results of this study focused on the personal web usage at work and the effect of the Internet usage policy. Future research on non-work-related Internet activity issues could be conducted by examining the actual Internet log file; doing so, could help the University to examine and identify any individual who has violated the Internet usage policy. The senior management could use the log file results to reflect on how the staff utilise the Internet for personal and work purposes in the work place.

The study could be conducted in other tertiary education institutions to determine whether the Internet usage policy is acceptable and whether, similar responses about non-work-related Internet activities are revealed. This could help to generalise the findings of the current study to an extended population in a similar working environment.

The study findings show that the perception of the general staff use non-work-related Internet activities more than academic staff. A further study should be undertaken to examine how the organisation balances the Internet usage among the staff members. Tertiary education institutions could use the findings to revise the Internet usage policy and electronic monitoring systems.

Future research could explore senior management and staff member’s mobile usage in the workplace, because the usage of smart devices could affect their productivity or job performance. In addition, this study revealed that senior management were not involved in the development of the Internet usage policy. Therefore, future research should examine how senior management could improve employees’ productivity and how awareness programme(s) could reduce Internet abuse.
REFERENCES


Glassman, J., Prosch, M., & Shao, B. B. M. (2015). To monitor or not to monitor: Effectiveness of a cyberloafing countermeasure. Information & Management, 52(2), 170-182. doi: http://dx.doi.org/10.1016/j.im.2014.08.001


APPENDIX A: Ethical Approval

A.1 Phase 1: Staff Member

Reporting Sheet for use ONLY for proposals considered at departmental level

ETHICAL APPROVAL AT DEPARTMENTAL LEVEL OF A PROPOSAL INVOLVING HUMAN PARTICIPANTS (CATEGORY B)

PLEASE read the important notes appended to this form before completing the sections below

NAME OF DEPARTMENT: Information Science

TITLE OF PROJECT: Staff web usage as compared to Internet policy at the University of Otago

PROJECTED START DATE OF PROJECT: 9 December 2011

STAFF MEMBER RESPONSIBLE FOR PROJECT: Dr. Henry B. Wolfe

NAMES OF OTHER INVESTIGATORS OR INSTRUCTORS: (Please specify whether staff or student. If student, please give the name of the qualification for which the student is enrolled)

Kean Foon Kwon, Masters Candidate

BRIEF DESCRIPTION OF THE AIMS: Please give a brief summary (approx. 200 words) of the nature of the proposal:

The aim of this project is to understand staff behaviours and attitudes on their Internet activities and perception on the Internet policy at the University of Otago. The Internet usage policy defines what is deemed to be appropriate use of the Internet and how the University manages and monitors the Internet access. Through this research, the researcher will be able to observe the attitudes and perception about how staff defined acceptable use, their Internet usage behaviour either for personal purposes or work purposes, and also their understanding and views on the current Internet policy.

This project will examine the extent to which staff responds to policy regulating Internet usage. This study involves collecting data via survey from a sample population of general and academic staff members based in the Dunedin campus.
BRIEF DESCRIPTION OF THE METHOD: Please include a description of who the participants are, how the participants will be recruited, and what they will be asked to do:

The participants will be from the general and academic staff members at the University of Otago based in Dunedin campus. A sample of 1000 staff members, who are listed in the University of Otago contact directory, will be randomly selected. The participation is based on voluntary basis with no monetary compensation. The participants are required to answer all questions.

DETAILS OF ETHICAL ISSUES INVOLVED: Please give details of any ethical issues which were identified during the consideration of the proposal and the way in which these issues were dealt with or resolved:

There are no personal details being sought and the researcher will not be able to identify the participant from the returned electronic questionnaire. As such, all participants will be anonymous. The data will be confidential to the researcher involved in the study and will be published only as a cumulative figure.

ACTION TAKEN

☒ Approved by Head of Department ☐ Approved by Departmental Committee

☐ Referred to University of Otago Human Ethics Committee ☐ Referred to another Ethics Committee
Please specify:

DATE OF CONSIDERATION: 12/12/2011

Signed (Head of Department): [Signature]

Please attach copies of any Information Sheet and/or Consent Form
8 December 2011

Staff web usage as compared to Internet policy at the University of Otago

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

What is the Aim of the Project?

The aim of the project is to gauge staff members understanding and views of Internet usage at the University of Otago. The project will examine the extent to which this University regulates staff Internet usage at work, and staff responses to any such regulation.

What Type of Participants are being sought?

This project will involve current general and academic staff members based at the Dunedin Campus.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to answer a web-based questionnaire. The questionnaire should take no longer than 5-10 minutes.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

Can Participants Change their Mind and Withdraw from the Project?

You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?

The participants will be asked about their Internet activities and their perceptions on the Internet activities that they consider appropriate and inappropriate. Respondents will be anonymous to the researcher.

The questionnaire results will be analysed and the findings will be reported in the researcher’s summer project.

The information collected will be confidential to the researchers involved in the study and will be published only as an aggregate form.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity.
The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. At the end of the project all information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

The security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

Kean Foon Kwon or Dr. Henry B. Wolfe

Department of Information Science

Email: kwoke518@student.otago.ac.nz Email:hwolfe@inforscience.otago.ac.nz

Office Number: 03 4797390 University Telephone Number: 03 4798141
Staff web usage as compared to Internet policy at the University of Otago

CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;

2. I am free to withdraw from the project at any time without any disadvantage;

3. Any unused and/or irrelevant data will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed;

4. The results of the project may be published and available in the University of Otago Library (Dunedin, New Zealand) and every attempt will be made to preserve my anonymity.

I agree to take part in this project.

.............................................................................................................  .............................................................................................................
(Signature of participant) (Date)
A.2 Phase 2: Senior Management

Form Updated: February 2011

HUMAN ETHICS APPLICATION: CATEGORY B

(Deartmental Approval)

1. University of Otago staff member responsible for project: Dr. Hank Wolfe
2. Department: Information Science
3. Contact details of staff member responsible: hwolfe@infoscience.otago.ac.nz
4. Title of project: Personal Web Usage: Policy versus Reality at the University of Otago
5. Indicate type of project and names of other investigators and students:

Staff Research

Names

Student Research X Names

Kean Foon Kwon (Ethan)

Level of Study (e.g. PhD, Masters, Hons) Masters
6. **When will recruitment and data collection commence?**

Data collection will commence in the middle of May 2012.

**When will data collection be completed?**

Date collection will be completed in the middle of June 2012.

7. **Brief description in lay terms of the aim of the project, and outline of research questions** (approx. 200 words):

The Internet has become an essential tool for individuals and organisations to access and communicate information to others. Anyone who has access to the Internet and e-mail at work may find himself or herself engaged in personal web usage. Most employees feel that activities such as forwarding an email to a friend or reading stock market results are harmless and do not cause any problems to the organisation. However, the hours spent per day by these employees on such activities could result in a financial loss to the organisation. The aim of the project is to gauge the management teams’ understanding and perception of Internet usage policy at the University of Otago as well as the impact of personal web usage on staff’s performance. The project will further examine the extent to which management teams are familiar with the development and parameters of the University’s acceptable Internet usage policy and the impact of the Internet usage policy.

These findings may have implications on the policy formulation and the enforcement programme for both the management and technical teams. An electronic survey will be conducted on management teams to record their experiences, perspectives of current Internet policy issues and countermeasures to cope with personal web usage.

8. **Brief description of the method.** Please include a description of who the participants are, how the participants will be recruited, and what they will be asked to do:-

The participants will be from the management teams (Head/Deputy of Department, Dean/Deputy Dean and Director/Deputy Director) at the University
of Otago’s Dunedin campus. Individuals are identified based on the University of Otago List of Heads of Departments (HODs) contact directory and also from departmental web sites. The participation in this research will be on a voluntary basis.

9. Please disclose and discuss any potential problems: (For example: medical/legal problems, issues with disclosure, conflict of interest, etc)

There are no personal details being sought and the researcher will not be able to identify the participant from the electronic questionnaire. As such, all responses will be anonymised. The data will be confidential to the researchers involved in the study and it may be possible that some quotations may be used in the thesis.

Applicant’s Signature: ........................................................................................................

(Principal Applicant: as specified in Question 1, Must not be in the name of a student)

Signature of *Head of Department: ................................................................................

Name of Signatory (please print): ....................................................................................

Date: ..............................................

Departmental approval: I have read this application and believe it to be scientifically and ethically sound. I approve the research design. The Research proposed in this application is compatible with the University of Otago policies and I give my consent for the application to be forwarded to the University of Otago Human Ethics Committee.

*(In cases where the Head of Department is also the principal researcher then an appropriate senior staff member in the department must sign)

IMPORTANT: The completed form, together with copies of any Information Sheet, Consent Form and any recruitment advertisement for participants, should be forwarded to the Manager Academic Committees or the Academic Committees Assistant, Registry, as soon as the proposal has been considered and signed at departmental level. Forms can be sent hardcopy to Academic Committees, Room G23 or G24, Ground Floor, Clocktower Building, or scanned and emailed to gary.witte@otago.ac.nz.
INFORMATION SHEET TEMPLATE

The following template should be used as a guide for providing information to potential participants before they agree to take part in the research project. Not all of the suggestions or headings on this template will necessarily apply to all projects. An Information Sheet is written in the form of a customised letter of invitation to each target group of research participants. It must contain all the information potential participants need in order to make an informed decision about whether or not they wish to participate in the research.

An Information Sheet is expected to be submitted with the application for ethical approval in all Category A applications and most Category B Reporting Sheets. The Information Sheet Template can be used as a prompt for a cover letter introducing the research even in cases where a formal written Consent Form is not used, eg, in an anonymous survey.

The Information Sheet should be written in appropriate language for your participants. In most cases it should be free from jargon and comprehensible to lay people.

The Information Sheet you submit with your application should be the final version you intend to use. All traces of the prompts from the Human Ethics Committee to the researcher should be removed and it should be carefully proofread for grammatical accuracy and consistency and correct spelling.
[Personal Web Usage: Policy versus Reality at the University of Otago]
INFORMATION SHEET FOR
[PARTICIPANTS or PARENTS / GUARDIANS ETC.]

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?

This project is undertaken as part of the requirements for the Master of Science (MSc). The aim of the project is to gauge the management teams’ understanding and perceptions of Internet policy at the University of Otago and also the impacts of personal web usage on staff performance. The project will examine the extent to which management teams are familiar with the development and parameters of the University’s acceptable Internet usage policy and the impacts of the Internet usage policy.

What Type of Participants are being sought?

This project will involve the management teams of various departments and divisions (Head/Deputy of Department, Dean/Deputy Dean and Director/Deputy Director) at the University of Otago’s Dunedin campus. Individuals are selected with reference to the University of Otago List of Heads of Departments (HODs) contact directory and departmental websites. The participation in this research will be on a voluntary basis.

What will Participants be Asked to Do?
Should you agree to take part in this project, you will be asked to answer an electronic open-ended questionnaire. The questionnaire should take no longer than 30 minutes.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it? The participants will be asked about Internet usage policy and issues they have encountered
relating to employees’ personal web usage, the impact of the Internet usage policy as well as their perception of problematic Internet activities during work hours.

The questionnaire results will be analysed and the findings will be reported in the researcher’s thesis. The information collected will be anonymised and in no circumstance will the participants’ identities be revealed, although it may be possible that quotations may be used in the thesis with permission only.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve participant anonymity.

The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. At the end of the project all information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

**Can Participants Change their Mind and Withdraw from the Project?**

There are no personal details being sought and the researcher will not be able to identify the participant from the returned electronic questionnaire. As such, all participants will be anonymous. The participant can opt out at any point without any disadvantage.

**What if Participants have any Questions?**

If you have any questions about our project, either now or in the future, please feel free to contact either:-

[Kean Foon Kwon (Ethan)] and/or Dr. Hank Wolfe

Department of Information Science Department of Information Science

University Telephone Number 03 479 390 University Telephone Number 03 479 8141

Email Address Email Address

kwoke518@student.otago.ac.nz hwolfe@infoscience.otago.ac.nz

This study has been approved by the Department stated above. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479-8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
(Note: Not all of the suggestions on this template will necessarily apply to all projects; for some projects, additional information may also be required)

Personal Web Usage: Policy versus Reality at the University of Otago
CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-

1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. Any unused and/or irrelevant data will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.
4. The results of the project may be published and available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve my anonymity.

I agree to take part in this project.

......................................................................................................................
......................................................................................................................
(Signature of participant) ..............................................................................
(Date)

[The advertisement which will be used to recruit participants should be attached to the application for ethical approval. This template can be used to develop the advertisement. Please ensure the standard of the written material is of the highest quality, with correct spelling and grammar. You may wish to include an image to increase your advertisement’s appeal.]
APPENDIX B  Email Invitation Letter

B.1 Phase 1: Staff Member

Hello,

You have been selected to participate in our Staff Web Usage Survey. Please note that no staff identification or contact information will be provided to the researchers. All data collected in this survey is anonymised. It will not take more than 5-10 minutes of your time.

If you have read the information below and would like to take part in the survey. Please click on the following link which will take you to the first survey:

https://www.surveymonkey.com/s/InternetUsageSurvey

Best Regards,

Kean Foon Kwon (Ethan)
Department of Information Science
Office Number: - 03 4797390

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide not to take part there will be no disadvantage to you of any kind and we thank you for considering our request.

What is the Aim of the Project?

The aim of the project is to gauge staff members understanding and views of Internet usage at the University of Otago. The project will examine the extent to which this University regulates staff Internet usage at work, and staff responses to any such regulation.

What Type of Participants are being sought?

This project will involve current general and academic staff members based at the Dunedin Campus.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to answer a web-based questionnaire. The questionnaire should take no longer than 5-10 minutes.
Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

Can Participants Change their Mind and Withdraw from the Project?
You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?
The participants will be asked about their Internet activities and their perceptions on the Internet activities that they consider appropriate and inappropriate. Respondents will be anonymous to the researcher.

The questionnaire results will be analysed and the findings will be reported in the researcherís summer project.

The information collected will be confidential to the researchers involved in the study and will be published only as an aggregate form.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity.

The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. At the end of the project all information will be destroyed immediately except that, as required by the University's research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

The security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

What if Participants have any Questions?
If you have any questions about our project, either now or in the future, please feel free to contact either:-

Kean Foon Kwon or Dr. Henry B. Wolfe
Department of Information Science Department of Information Science
Email: kwoke518@student.otago.ac.nz Email: hwolfe@inforscience.otago.ac.nz
Office Number:-03 4797390 University Telephone Number:-03 4798141
B.2 Phase 2: Senior Management

Title: Information Science Survey: Internet Usage Policy
Dear Mr. XXX,

My name is Ethan Kwon and I am currently doing my Masters in computer security supervised by Associate Professor Henry B. Wolfe. I am doing a survey as part of my research.

The Internet has become an essential tool for individuals and organisations to access and communicate information to others. Most staff rely on the Internet to conduct research and transmit information. The aim of this survey is to gauge senior staff experiences and perceptions on the recent implementation of the Internet Usage Policy at the University of Otago.

Pilot testing has shown this survey takes 10-15 minutes to complete, and I would be grateful if you could take the time to complete the survey. The survey is available from 23 May until 31 May.

Should you have any problems accessing the survey, or any questions, please feel free to contact us at 03 4797390 (Ethan Kwon) or 03 4798141 (Dr. Wolfe).

Before you take part in this survey, please read the information sheet below. Please click on the following link to start the survey:

https://www.surveymonkey.com/s/KJBHGV5

Thank you in advance for your consideration and your participation.

Best Regards,
Kean Foon Kwon (Ethan)
Department of Information Science

According to University Ethical procedures, please note that no personal identification or contact information will be provided to the researchers.

All data collected in this survey is anonymised.

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.
What is the Aim of the Project?

This project is undertaken as part of the requirements for the Master of Science (MSc). The aim of the project is to gauge the management teams’ understanding and perceptions of Internet policy at the University of Otago and also the impacts of personal web usage on staff performance. The project will examine the extent to which management teams are familiar with the development and parameters of the University’s acceptable Internet usage policy and the impacts of the Internet usage policy.

What Type of Participants are being sought?

This project will involve the management teams of various departments and divisions (Head/Deputy of Department, Dean/Deputy Dean and Director/Deputy Director) at the University of Otago’s Dunedin campus. Individuals are selected with reference to the University of Otago List of Heads of Departments (HODs) contact directory and departmental websites. The participation in this research will be on a voluntary basis.

What will Participants be Asked to Do?

Should you agree to take part in this project, you will be asked to answer an electronic open-ended questionnaire. The questionnaire should take no longer than 15 minutes.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?

The participants will be asked about Internet usage policy and issues they have encountered relating to employees’ personal web usage, the impact of the Internet usage policy as well as their perception of problematic Internet activities during work hours.

The questionnaire results will be analysed and the findings will be reported in the researcher’s thesis. The information collected will be anonymised and in no circumstance will the participants’ identities be revealed, although it may be possible that quotations may be used in the thesis.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve participant anonymity.

The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. At the end of the project all information will be destroyed immediately except that, as required by the University’s research policy, any raw data on which the results of the project depend will be retained in secure storage for five years,
after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

Can Participants Change their Mind and Withdraw from the Project?

There are no personal details being sought and the researcher will not be able to identify the participant from the returned electronic questionnaire. As such, all participants will be anonymous. The participant can opt out at any point without any disadvantage.

What if Participants have any Questions?

If you have any questions about our project, either now or in the future, please feel free to contact either:-

[Kean Foon Kwon (Ethan)] and/or Dr. Hank Wolfe
Department of Information Science Department of Information Science
University Telephone Number 03 479 390 University Telephone Number 03 479 8141
Email Address Email Address
kwoke518@student.otago.ac.nz hwolfe@infoscience.otago.ac.nz

This study has been approved by the Department stated above. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479-8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
APPENDIX C Questionnaire

C.1 Phase 1: Staff members

QUESTIONNAIRE

NOTE: ALL DATA COLLECTED IN THIS SURVEY IS ANONYMISED.

1. Age:
   - 18-29
   - 30-39
   - 40-49
   - 50 or older

2. Gender: [Male/Female]

3. Job Classification: [Academic/General/Contractor/Other]

4. How long have you been in your current position:
   - Less than 2 years
   - 2-5 years
   - 6-10 years
   - 10+ years

5. Years of Internet experience (work and personal):
   - Less than 2 years
   - 2-5 years
   - 6-10 years
   - 10+ years

6. How much time, on average, do you spend accessing the Internet for work purposes during work hours in a day?
   - Never
   - < 1 hour
   - 1-3 hours
   - 4-5 hours
   - 6+ hours
Please indicate for each activity below, how often during last week you have engaged in these activities on a computer at work.

Please select the column corresponding to these codes

(1) Never   (2) 1-4 times per day   (3) 5-14 times per day   (4) 15-19 times per day   (5) More than 20 times per day

<table>
<thead>
<tr>
<th>Activity Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Accessed social network sites such as Facebook, Twitter and the like.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Used social network sites as a part of your work</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9. Accessed research materials</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10. Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Sent or forwarded non-work-related email</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Read online news, sports, weathers, etc</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Read travel and leisure web sites for non-work-related activities</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>14. Shopped online</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>15. Conducted personal investment and banking activities</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>16. Downloaded and/or viewed video, audio, picture for personal entertainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Scanned through adult oriented (sexually explicit) web sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please select **ONE ANSWER ONLY** for the remaining questions:

18. How much time, on average, do you spend accessing the Internet for personal purposes during work hours in a week?
   - Never
   - < 1 hour
   - 1-3 hours
   - 4-5 hours
   - 6+ hours

19. It is appropriate to send non-work-related email during work hours.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree
20. It is appropriate to create, access, store and display inappropriate content outside work hours on work equipment (e.g. sexually explicit materials, auction sites, dating sites, gambling sites, games and the like).
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

21. It is appropriate to conduct personal use of the Internet outside work hours on work equipment.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

22. It is appropriate for the University to monitor personal use of the Internet and email during work hours.
   - Strongly agree
   - Agree
   - Neutral
   - Disagree
   - Strongly disagree

23. Does the University of Otago have an Internet usage policy?
   - Yes
   - No -> continue to Q27
   - Don’t know -> continue to Q27

24. The University of Otago’s Internet usage policy (Please select one answer)
   - Allows unlimited personal use of the Internet access to non-work-related activities
   - Allows limited personal use of the Internet access to non-work-related activities
   - Strictly prohibits personal use of the Internet access to non-work-related activities
   - Don’t know

25. Do you believe the Internet usage policy is a good policy?
   - Yes
   - No
   - Neutral
   - Don’t know
26. The implementation of the Internet usage policy does not have any impact on my job performance.
   - Yes
   - No
   - Neutral
   - Don’t know

27. The University of Otago cannot identify the people who are accessing the Internet
   - Yes
   - No
   - Don’t know

28. Have you been to a formal presentation on the University of Otago Internet policy?
   - Yes
   - No
   - Don’t know

THANK YOU FOR YOUR PARTICIPATION!
C.2 Phase 2: Senior Management

Survey questionnaire

All responses will be anonymised and in no circumstance will the participant’s identities be revealed.

1) I agree to take part in this project.
   Yes/No

2) Are you aware of the Internet usage policy implemented at the University?
   Yes/No

3) In your opinion, do you think the Internet usage policy is easy to understand?
   Yes/No

4) Have you organised any training on the Internet policy in your department?

4a) If yes, please briefly describe what type of training did you organise?

5) Who/which department is responsible for conducting the training relating to the University’s Internet policy

6) Prior to the implementing of this policy, have you encountered any incidents of staff abusing Internet privileges?
   Yes/No

6a) If yes, how many incidents and was any action taken to control the situation?

7) Do you think it’s appropriate for your staff to access the Internet for personal purposes during office hours?
8) How were your staff made aware of this policy?

________________________________________________________

9) Do you believe the awareness and training program will reduce personal web usage at the University?
Yes/No

________________________________________________________

10) Do you think it’s appropriate for your staff to access the Internet for personal purposes after office hours?
Yes/No

________________________________________________________

11) Have you been formally informed of any violations of the Internet usage policy within your department/division?
Yes/No

________________________________________________________

11a) If yes, was any action taken to control the situation?

________________________________________________________

12) Were you involved in the development of the Internet policy?
Yes/No

________________________________________________________

13) How were you involved in the development of the Internet policy?
14) Thinking of policies that have recently been successfully implemented at this University, what factors do you think were most important in such success?

15) Do you think the monitoring tools and policy used within the University impact individual decisions to abuse the Internet?

None/Almost None/Minor/Major/Other

16) Do you think the implementation of the Internet policy has any impact on staff performance?

None/Almost None/Minor/Major/Other

17) In your opinion, what do you consider are the more problematic personal Internet activities by staff during work hours? Tick one or more boxes, as appropriate.

- Social networking
- Sending/forwarding non-work-related emails
- Reading online news, sports, weathers
- Downloading/viewing video, audio, picture
- Downloading software
- Adult-oriented material
- Other

18) Any other comments?
### APPENDIX D

D.1 Test of Normality Results on Gender (Questions 7-17)

| Tests of Normality | Gender | Kolmogorov-Smirnov\(^a\) | Shapiro-Wilk | | | |
|-------------------|--------|--------------------------|---------------|-------|-------|
|                   |        | Statistic | df | Sig. | Statistic | df | Sig. |
| Accessed social network sites such as Facebook, Twitter and the like | Male | .315 | 79 | .000 | .705 | 79 | .000 |
| | Female | .312 | 119 | .000 | .699 | 119 | .000 |
| Used social network sites as part of your work | Male | .413 | 79 | .000 | .563 | 79 | .000 |
| | Female | .432 | 119 | .000 | .615 | 119 | .000 |
| Accessed research materials | Male | .269 | 79 | .000 | .835 | 79 | .000 |
| | Female | .340 | 119 | .000 | .779 | 119 | .000 |
| Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc | Male | .261 | 79 | .000 | .756 | 79 | .000 |
| | Female | .278 | 119 | .000 | .733 | 119 | .000 |
| Sent or forwarded non-work-related email | Male | .356 | 79 | .000 | .661 | 79 | .000 |
| | Female | .358 | 119 | .000 | .686 | 119 | .000 |
| Read online news, sports, weathers, etc | Male | .382 | 79 | .000 | .718 | 79 | .000 |
| | Female | .388 | 119 | .000 | .686 | 119 | .000 |
| Read travel and leisure web sites for non-work-related activities | Male | .439 | 79 | .000 | .568 | 79 | .000 |
| | Female | .447 | 119 | .000 | .590 | 119 | .000 |
| Shopped online | Male | .483 | 79 | .000 | .506 | 79 | .000 |
| | Female | .421 | 119 | .000 | .621 | 119 | .000 |
| Conducted personal investment and banking activities | Male | .363 | 79 | .000 | .634 | 79 | .000 |
| | Female | .351 | 119 | .000 | .636 | 119 | .000 |
| Downloaded and/or viewed video, audio, picture for personal entertainment | Male | .421 | 79 | .000 | .599 | 79 | .000 |
| | Female | .478 | 119 | .000 | .517 | 119 | .000 |
| Scanned through adult oriented (sexually explicit) web sites | Male | .532 | 79 | .000 | .090 | 79 | .000 |

\(^a\) Lilliefors Significance Correction

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b. Scanned through adult oriented (sexually explicit) web sites is constant when Gender = Female. It has been omitted.
D.2 Test of Normality Results on Job Classification (Questions 7 -17)

<table>
<thead>
<tr>
<th>Tests of Normality*</th>
<th>Job Classification:</th>
<th>Kolmogorov-Smirnov(^a)</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Accessed social network sites such as Facebook, Twitter and the like</td>
<td>Academic</td>
<td>.301</td>
<td>91</td>
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<tr>
<td></td>
<td>General</td>
<td>.330</td>
<td>107</td>
</tr>
<tr>
<td>Used social network sites as part of your work</td>
<td>Academic</td>
<td>.412</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.431</td>
<td>107</td>
</tr>
<tr>
<td>Accessed research materials</td>
<td>Academic</td>
<td>.286</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.380</td>
<td>107</td>
</tr>
<tr>
<td>Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc</td>
<td>Academic</td>
<td>.277</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.268</td>
<td>107</td>
</tr>
<tr>
<td>Sent or forwarded non-work-related email</td>
<td>Academic</td>
<td>.372</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.381</td>
<td>107</td>
</tr>
<tr>
<td>Read online news, sports, weathers, etc</td>
<td>Academic</td>
<td>.351</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.398</td>
<td>107</td>
</tr>
<tr>
<td>Read travel and leisure web sites for non-work-related activities</td>
<td>Academic</td>
<td>.449</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.438</td>
<td>107</td>
</tr>
<tr>
<td>Shopped online</td>
<td>Academic</td>
<td>.476</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.420</td>
<td>107</td>
</tr>
<tr>
<td>Conducted personal investment and banking activities</td>
<td>Academic</td>
<td>.360</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.352</td>
<td>107</td>
</tr>
<tr>
<td>Downloaded and/or viewed video, audio, picture for personal entertainment</td>
<td>Academic</td>
<td>.496</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>General</td>
<td>.420</td>
<td>107</td>
</tr>
<tr>
<td>Scanned through adult oriented (sexually explicit) web sites</td>
<td>General</td>
<td>.529</td>
<td>107</td>
</tr>
</tbody>
</table>

* a. Lilliefors Significance Correction
b. Scanned through adult oriented (sexually explicit) web sites is constant when Job Classification: = Academic. It has been omitted.
### D.3 A Matrix Relation between Survey and Research Questions

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Research Question(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 1-6 Demographic Information</td>
<td>X X X X X X</td>
</tr>
<tr>
<td>Q2 7. Accessed social network sites such as Facebook, Twitter and the like.</td>
<td>X</td>
</tr>
<tr>
<td>Q3 8. Used social network sites as part of your work.</td>
<td>X</td>
</tr>
<tr>
<td>Q3b 10. Used personal web-based email such as Gmail, Yahoo!, Hotmail, etc.</td>
<td>X</td>
</tr>
<tr>
<td>Q3c 11. Sent or forwarded non-work-related email.</td>
<td>X</td>
</tr>
<tr>
<td>Q3d 12. Read online news, sports, weathers, etc.</td>
<td>X</td>
</tr>
<tr>
<td>Q3e 13. Read travel and leisure web sites for non-work-related activities.</td>
<td>X</td>
</tr>
<tr>
<td>Q3f 14. Shopped online.</td>
<td>X</td>
</tr>
<tr>
<td>Q3g 15. Conducted personal investment and banking activities.</td>
<td>X</td>
</tr>
<tr>
<td>Q3h 16. Downloaded and/or viewed video, audio, picture for personal entertainment.</td>
<td>X</td>
</tr>
<tr>
<td>Q3i 17. Scanned through adult oriented (sexually explicit) web sites.</td>
<td>X</td>
</tr>
<tr>
<td>Q3j 19. It is appropriate to send non-work-related email during work hours.</td>
<td>X</td>
</tr>
<tr>
<td>Q3k 21. It is appropriate to conduct personal use of the Internet outside work hours on work equipment.</td>
<td>X</td>
</tr>
<tr>
<td>Q3l 22. It is appropriate for the University to monitor personal use of the Internet and email during work hours.</td>
<td>X</td>
</tr>
<tr>
<td>Q3m 23. Does the University of Otago have an Internet usage policy?</td>
<td>X</td>
</tr>
<tr>
<td>Q3n 24. The University of Otago’s Internet usage policy (Please select one answer)</td>
<td>X</td>
</tr>
<tr>
<td>Q3o 25. Do you believe the Internet usage policy is a good policy?</td>
<td>X</td>
</tr>
<tr>
<td>Q3p 26. The implementation of the Internet usage policy does not have any impact on my job performance.</td>
<td>X</td>
</tr>
</tbody>
</table>